

# AiSHi

AiSHi FILM CAPACITORS

2020-2021Y Catalogue



## Film Capacitors 2020-2021Y Catalogue

Provide Film Capacitors To The World With Excellent Performance

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## Table of Content

<b>General Description</b>		
Typical dielectric features		2
The standard system of capacitors		3
Capacitor terminologies		4
Part numbering system		7
<b>DC Film Capacitors</b>		
FGA	Metallized Polypropylene Film Capacitor PFC (Box Type, PFC)	9
FGB	Metallized Polypropylene Film Capacitor (Box Type, Pulse)	12
FGC	Metallized Polypropylene Film Capacitor with Double Sided Metallized Film (Box Type)	17
FGD	Metallized Polypropylene Film Capacitor (High Voltage, Box Type)	23
FGG	Metallized Polyester Film Capacitor (Box Type)	26
FGH	Metallized Polypropylene Film Capacitor (Box Type, PFC 125°C)	31
FGJ	Metallized Polyester Film Capacitor (Box Type, P=5mm)	33
<b>EMI Capacitors</b>		
FX2	Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2)	36
FXT	Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2, THB)	39
FXQ	Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2, Automotive Grade)	42
FXB	Metallized Polypropylene Film Capacitor For Capacitive Divider (Class X2, THB)	44
FX1	Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1, THB)	46
FY2	Metallized Polypropylene Film Capacitor (Interference Suppressor Class Y2, Automotive Grade)	54
<b>Snubber Capacitors</b>		
FSA	Metallized Polypropylene Film Capacitor (Radial Lead)	59
FSQ	Metallized Polypropylene Film Capacitor (Radial Lead, Automotive Grade)	62
FSB	Metallized Polypropylene Film Capacitor (Lug Terminal)	65
FSC	Metallized Polypropylene Film Capacitor (Axial Lead, Oval Type)	70
FSD	Metallized Polypropylene Film Capacitor (Axial Lead, Round Type)	74
FSE	Metallized Polypropylene Film Capacitor (High voltage, High current pulse, Axial type) (GTO)	78
<b>DC-Link Capacitors</b>		
FDA	Metallized Polypropylene Film Capacitor (Radial Lead)	81
FDG	Metallized Polypropylene Film Capacitor (Radial Lead, THB)	88
FDQ	Metallized Polypropylene Film Capacitor (Radial Lead, Automotive Grade)	95
FDJ	Metallized Polyester Film Capacitor (Radial Lead, Automotive Grade 125°C)	100
FDB	Metallized Polypropylene Film Capacitor (Top Terminal)	105
FDC	Metallized Polypropylene Film Capacitor (Aluminium Can)	108
FDD	Metallized Polypropylene Film Capacitor (Snap-in)	113
FDE	Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV, Automotive Grade)	115
<b>AC-Filter Capacitors</b>		
FAA	Metallized Polypropylene Film Capacitor (Radial Lead )	127
FAG	Metallized Polypropylene Film Capacitor (Radial Lead, THB)	129
FAQ	Metallized Polypropylene Film Capacitor (Radial Lead, Automotive Grade)	131
FAB	Metallized Polypropylene Film Capacitor (Axial Lead)	133
FAH	Metallized Polypropylene Film Capacitor (Axial Lead, THB)	137
FAC	Metallized Polypropylene Film Capacitor (Aluminum Can, Single-Phase)	141
FAD	Metallized Polypropylene Film Capacitor (Aluminum Can, Three-Phase)	146
<b>Motor Run Capacitors</b>		
FAE	Metallized Polypropylene Film AC Motor Capacitor (Aluminum Can)	150
FAF	Metallized Polypropylene Film AC Motor Capacitor (Aluminium Can, Dual Cap)	153
FAJ	Metallized Polypropylene Film AC Motor Capacitor (Box Type, Safety Class SO)	156
FAK	Metallized Polypropylene Film AC Motor Capacitor (Box Type, Safety Class S3)	159
<b>Power Capacitors - Customize Products</b>		
FHA	Medium \High Power DC Capacitor (Rectangular Case ) - Customize Products	163

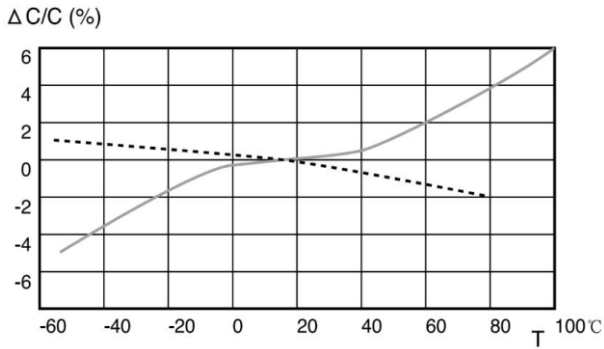
\* THB : Temperature Humidity Bias

# Metallized Polypropylene / Polyester Film Capacitors

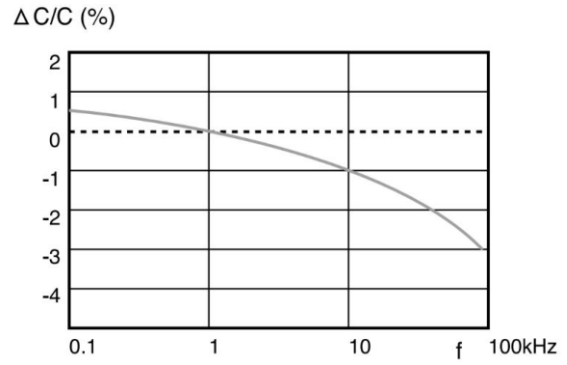
## Typical dielectric features

Compared to polyester, the Polypropylene as a dielectric has the following inherent properties:

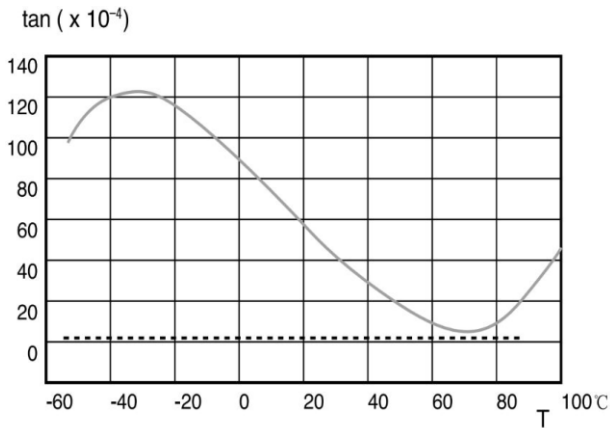
- Very low dissipation factor
- High insulation resistance
- High thermal stability
- Excellent self-healing features



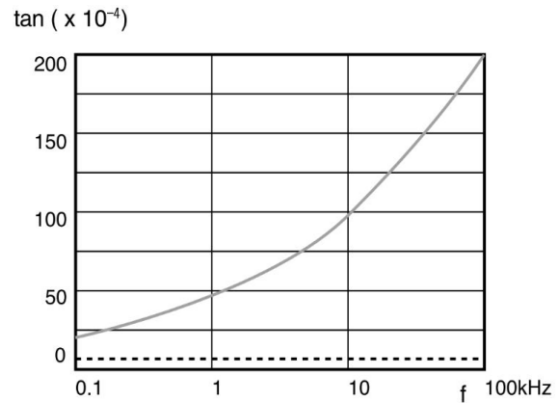
Capacitance Vs. Temperature at 1kHz



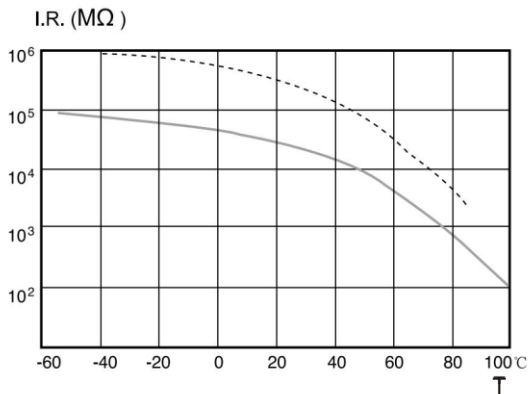
Capacitance Vs. Frequency (Room temperature)



Dissipation Vs. Temperature at 1kHz



Dissipation Vs. Frequency (Room temperature)



I.R. Vs. Temperature

- Polypropylene Film
- Polyester Film

## Metallized Polypropylene / Polyester Film Capacitors

### The standard system of capacitors

The reference standard for our capacitors are shown in below table, please find the corresponding specification.

Name No.	Standards
IEC 60384-1	Part 1: Generic specification
IEC 60384-2	Part 2: Fixed metallized polyethylene-terephthalate film dielectric d.c. capacitors
IEC 60384-13	Part 13: Sectional specification: Fixed capacitors: Fixed polypropylene film dielectric metal foil d.c. capacitors
IEC 60384-14	Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains
IEC 60384-16	Part 16: Sectional specification: Fixed metallized polypropylene film dielectric d.c. capacitors
IEC 60384-17	Part 17: Sectional specification: Fixed metallized polypropylene film dielectric a.c. and pulse capacitors
IEC 61071	Capacitors for power electronics
IEC 60831-1	Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1000V Part 1: General - performance, testing and rating - safety requirements - Guide for installation and operation
IEC 60831-2	Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1000V Part 2: Aging test, self-healing test and destruction test
IEC 61881	Railway applications - Rolling stock equipment - Capacitors for power electronics
IEC 61373	Railway applications - Rolling stock equipment - Shock and Vibration tests
AEC-Q200	Stress test qualification for passive components
IEC 60721-3-1	Classification of environmental conditions - Part 3 Classification of groups of environmental parameters and their severities- Section 1 Storage
IEC 60721-3-2	Classification of environmental conditions - Part 3 Classification of groups of environmental parameters and their severities- Section 2 Transportation and handling
IEC 60721-3-3	Classification of environmental conditions - Part 3 Classification of groups of environmental parameters and their severities- Section 3 Stationary use at weatherprotected locations

## Capacitor terminologies

### Rated Capacitance (C)

Designed capacitance of the capacitor at 20°C / 50 Hz to 120Hz

### Capacitance Tolerance

Admitted capacitance deviation from the rated capacitance.

### Rated Voltage Un

The maximum direct voltage or the maximum r.m.s. alternating voltage (50 Hz) or the peak value of a pulse voltage which may be continuously applied to a capacitor at any temperature between the lower category temperature and the rated temperature.

### RMS Voltage (Urms)

Root mean square of the maximum permissible value of the sinusoidal AC voltage in continuous operation.

### Ripple Voltage (Ur)

Peak to peak alternating component of the unidirectional voltage

### Non-recurrent Surge Voltage (Us)

Surge voltage induced by a switching or any other disturbance of system which is allowed for a limited number of times and for durations shorter than the basic period.

### Maximum Current (Imax)

Maximum rms current for continuous operation.

### Maximum Peak Current (Ipeak)

Maximum permitted repetitive peak current that can occur during continuous operation. The value is following:

$$I_{peak} = C * dv/dt.$$

C = Rated Capacitance

dv/dt = The rate of voltage rise, which means maximum permitted repetitive rate of voltage rise of operational voltage.

### Maximum Surge Current (Is)

Peak non-repetitive current induced by a switching or any other disturbance of system which is allowed for a limited number of times and for durations shorter than the basic period.

### Temperature Derated Voltage

The maximum voltage that may be continuously applied to a capacitor for any temperature between the rated temperature and the upper category temperature.

### Operating Temperature Range

The operating temperature of the capacitor is defined as the ambient temperature + self-temperature raise + temperature rise due to thermal radiation from other heat sources.

### Climatic Category

The climatic category which the capacitor belongs to is expressed in numbers (standard IEC 60068-1: For example 40/85/56).

40 = Lower Category Temperature -40 °C

85 = Upper category Temperature +85 °C

56 = the days relevant to the damp heat test 56days

### Temperature Coefficient of Capacitance (α)

The change rate of capacitance with temperature measured over a specified range of temperature. It is normally expressed in parts per million per Celsius degree (10<sup>-6</sup> /°C) and referred to 20°C

$$\alpha = \frac{C_i - C_0}{C_0(T_i - T_0)}$$

C<sub>i</sub> = Capacitance at the temperature T<sub>i</sub>

C<sub>0</sub> = Capacitance at the temperature T<sub>0</sub> (20±2) °C

### Series Resistance (Rs)

Effective ohmic resistance of the conductors of a capacitor under specified operating conditions. It depends on temperature and the approximate TCR is 0.004/°C.

$$Rs(T_2) = [1+0.004 * (T_2 - T_1)] * Rs(T_1)$$

### Equivalent Series Resistance (ESR)

ESR is the ohmic part of an equivalent series circuit. Its value assumes all losses to be represented by a single resistance in series with the idealized capacitor. The ESR comprises the polarization losses of the dielectric material (R<sub>pol</sub>), the losses caused by the resistance of the leads, termination and electrodes (R<sub>s</sub>) and the insulation resistance (R<sub>is</sub>)

$$ESR = \frac{\tan \delta}{\omega * C}$$

### Dielectric Dissipation Factor (tan δ<sub>d</sub>)

Constant dissipation factor of the dielectric material for all capacitors at their rated frequency. The typical loss factor of polypropylene film is 2\*10<sup>-4</sup>.

### Loss Factor of The Capacitor (tan δ)

The dissipation factor is ratio between reactive power of the impedance of the capacitor and effective power when capacitor is submitted to a sinusoidal voltage of specified frequency, it is that ratio between the equivalent series resistance and the capacitive reactance of a capacitor.

### Impedance (Z)

The impedance Z is the magnitude of the vectorial sum of ESR and the capacitive reactance XC in an equivalent series circuit under consideration of the series inductance L.

$$Z = \sqrt{ESR^2 + \left(\omega L + \frac{1}{\omega C}\right)^2}$$

The impedance is typically measured on capacitors (radial types) having 2 mm long leads.

## Capacitor terminologies

### Insulation Resistance ( $R_{is}$ ) and Time Constant ( $\tau$ )

The  $R_{is}$  is the ratio of an applied DC voltage to the resulting leakage current (flowing through the dielectric and over its body surface) after the initial charging current has ceased. The  $R_{is}$  is typically measured after one minute  $\pm 5s$  at 20 °C and a relative humidity of 50 %  $\pm 2\%$ .

$$R_{is} = \frac{U_{DC}}{I_{leak}} (\Omega)$$

The insulation resistance is determined by the property and the quality of the dielectric material and the capacitor's construction. The  $R_{is}$  decreases with increasing temperature. A high relative humidity may decrease the insulation resistance.  $R_{is}$  changes due to moisture are reversible. The  $R_{is}$  is shown as time constant ( $\tau$ ). It is the product of insulation resistance and capacitance and is expressed in seconds

$$\tau = R_{is} * C$$

### Inductance (L)

The inductance of a capacitor depends upon the geometric design of the capacitor element and the length and the thickness of the contacting terminals. All the film capacitors have an extended metallized film or foil construction and exhibit thus a very low inductance. The inductance of radial leaded capacitor types are typically measured with 2 mm long lead wires. Typical values are less than 1.0 nH per mm of lead length.

### Dielectric Power Loss (Pd)

Loss power induced by dielectric polarization or dielectric conductance. The value is following:

$$Pd = U^2 \times \pi \times f_0 \times C \times \tan \delta_d$$

for DC capacitor:  $U = U_r/2$

for AC capacitor:  $U = \sqrt{2} U_{rms}$

for GTO snubber capacitors:  $U = U_{ndc}/2$

$f_0$  : fundamental frequency

C: capacitance

### Joule Power Loss (Pj)

Loss power induced by series resistance of the capacitor under rms current, the value is following:

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

### Capacitor Loss (Pt)

Active power dissipated in the capacitor, consist of dielectric loss and joule loss.

$$Pt = Pd + P_j$$

### Resonance Frequency ( $f_r$ )

Lowest frequency at which the impedance of the capacitor becomes minimum. The value is following:

$$f_r = 1/(2\pi \times \sqrt{L_s \times C_n})$$

### Maximum Operating Temperature ( $\theta_{max}$ )

The highest temperature of the case at which the capacitor may be operated.

### Minimum Operating Temperature ( $\theta_{min}$ )

The lowest temperature of the case at which the capacitor may be energized.

### Cooling-air Temperature ( $\theta_{amb}$ )

Temperature of the air measured at the hottest position of the capacitor, under steady-state conditions, midway between two units. If only one unit is involved, it is the temperature of surrounding air, measured 10 cm away and at 2/3 of the case height of the capacitor under steady-state conditions.

### Contained Temperature Rise ( $\Delta \theta_{case}$ )

Difference between the temperature of the hottest point of the container and the temperature of the cooling air.

### Thermal Resistance ( $R_{th}$ )

The thermal resistance indicates by how many degrees the capacitor temperature at the hotspot rises above the ambient temperature per watt of the heat dissipation losses.

### Hotspot Temperature ( $\theta_{hs}$ )

Temperature at the hottest spot inside the capacitor. the value is following:

$$\theta_{hs} = \theta_{amb} + P_t \times R_{th}$$

### Failure rate ( $\lambda$ )

It indicates the failure probability of components in unit time and the value is the number of failure components in unit time compared to total number of components, the unit of  $\lambda$  is FIT (also expressed as Fit or fit) and 1 Fit = 1/ (10<sup>9</sup>hrs) For example: 10 000 pcs of components work at given condition for 10000 hrs and 10 pcs of components failed, so  $\lambda = 10/(10\ 000 \times 10\ 000) = 100$  Fit

## Capacitor terminologies

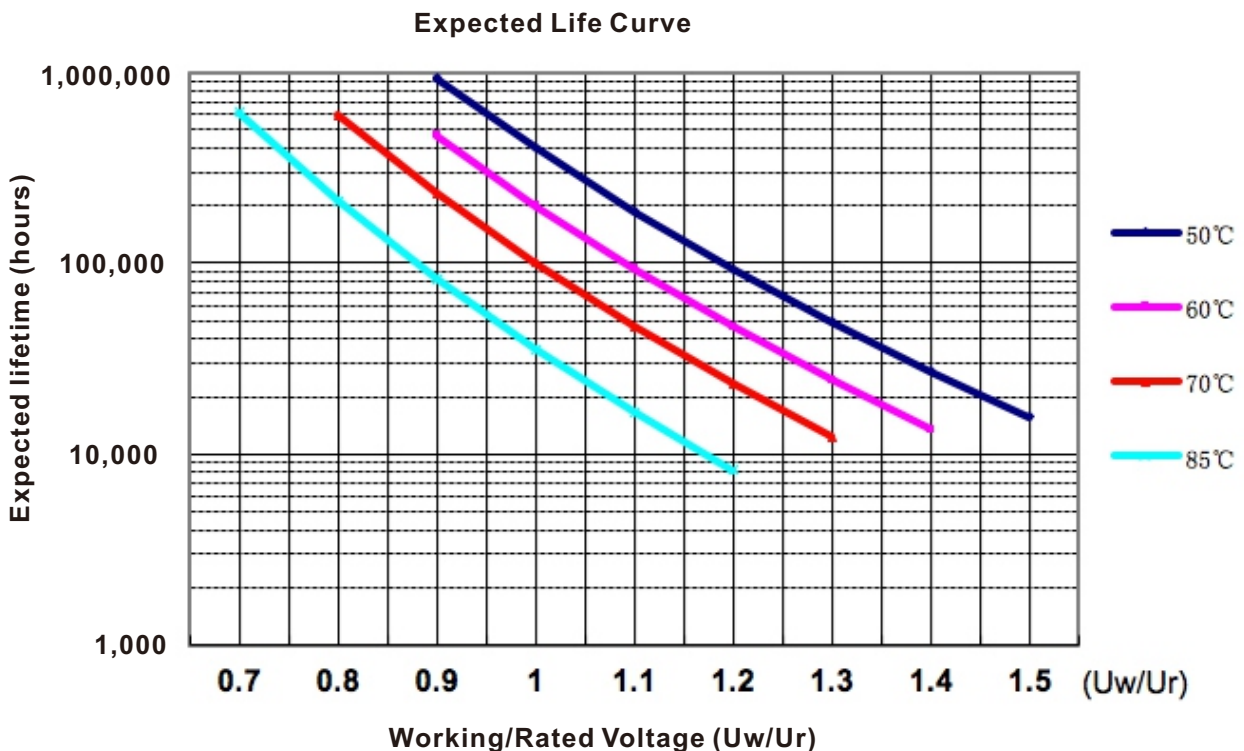
### Self-Healing

Self-healing, also known as clearing is the removal of a defect caused by pinholes, film flaws or external voltage transients. The heat generated by the arcing during a breakdown, evaporates the extremely thin metallization of the film around the point of failure, thereby removing and isolating the short circuit conditions. On Segmented Film Technology Capacitors, the self-healing effect is more controlled. The film metallization is made by forming a pattern of segments, which are connected to each other by micro fuses. This limits the healing current and limits the self-healing effect to a well-defined section of the film.

### Expected Lifetime of Capacitor

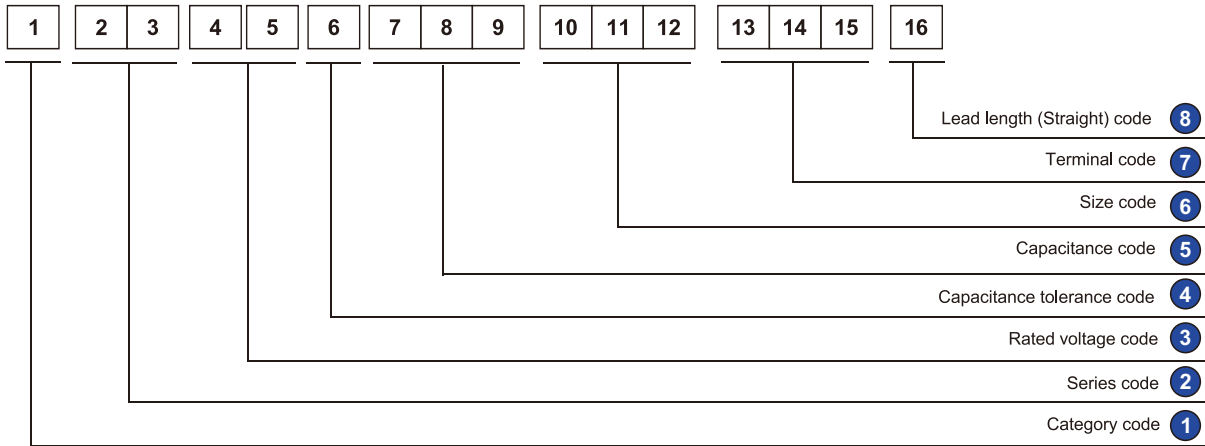
The expected life time of capacitor depend on the applied voltage and the hot spot temperature during the operation. For capacitors applied in different situation, the designed average service life is different.

In the capacitor industry, capacitors used in DC-Link circuits will have an expected lifetime of probable 100,000 Hrs at rated voltage and 70 °C hot spot temperature. Expected lifetime is a statistical value calculated on the basis of experience and on theoretical evaluations. The following diagrams show the correlation between expected life, operating voltage and hot spot temperature. The diagram should be considered only as a reference. Please contact our technical department if you have any further question.



# Metallized Polypropylene / Polyester Film Capacitors

## Part numbering system



### 1 Category code

Type	code 1
Film Capacitor	F

### 2 Series code

Series name	code 2	code 3
DC Film Capacitor	G	A~Y
EMI Capacitor	X / Y	1~3/A~Y
Sunbber Capacitor	S	A~Y
DC-Link Capacitor	D	A~Y
AC-Filter Capacitor	A	A~Y
Motor Run Capacitor	A	A~Y
Power Capacitor	H	A~Y

### 3 Voltage code

RV (Vdc)	code 4	code 5
100	1	K
160	2	C
200	2	D
250	2	E
300	2	F
350	2	V
400	2	G
420	2	T
450	2	W
500	2	H
550	2	J
600	2	K
630	2	L
700	2	M
800	2	N
850	2	P
900	2	Q
other	2	R~Y

### 3 Voltage code

RV (Vdc)	code 4	code 5
1000	3	K
1100	3	M
1200	3	B
1250	3	R
1300	3	S
1400	3	T
1500	3	U
1600	3	W
1700	3	X
1800	3	Y
2000	3	D
2500	3	E
3000	3	F
3500	3	V
4000	3	G
4500	3	W
5000	3	H
5500	3	J

### 3 Voltage code

RV (Vac)	code 4	code 5
160	1	6
220	2	2
250	2	5
275	2	7
305	3	0
310	3	1
330	3	3
350	3	5
400	4	0
440	4	4
450	4	5
480	4	8
500	5	0
550	5	5
600	6	0
690	6	9
1000	A	0
2000	B	0

### 4 Tolerance code

Tol- (%)	code 6
±1%	F
±2%	G
±3%	H
±5%	J
±10%	K
±20%	M

### 5 Capacitance code

Cap (uF)	code 7	code 8	code 9
0.001	1	0	2
0.01	1	0	3
0.1	1	0	4
1	1	0	5
10	1	0	6
100	1	0	7
1000	1	0	8
0.0015	1	5	2
0.015	1	5	3
0.15	1	5	4
1.5	1	5	5
15	1	5	6
150	1	5	7
1500	1	5	8

### 5 Capacitance code

Cap (uF)	code 7	code 8	code 9
5+1	0	5	1
10+1	1	0	1
15+3	1	5	3
20+5	2	0	5
30+6	3	0	6
35+7.5	3	5	7
40+8	4	0	8
45+9	4	5	9
50+5	5	0	5
60+7.5	6	0	7
65+7.5	6	5	7
70+7.5	7	0	7
80+10	8	0	A
100+12	A	0	B

### 6 Size code

Type Box	code 10	code 11	code 12
P=5.0 Case	A	1~9	0~9
P=7.5 Case	B	1~9	0~9
P=10 Case	C	1~9	0~9
P=12.5 Case	D	1~9	0~9
P=15 Case	E	1~9	0~9
P=22.5 Case	F	1~9	0~9
P=27.5 Case	G	1~9	0~9
P=30 Case	H	1~9	0~9
P=32.5 Case	J	1~9	0~9
P=37.5 Case	K	1~9	0~9
P=42 Case	L	1~9	0~9
P=52.5 Case	M	1~9	0~9
Case 42.5	N	1~9	0~9
Case 57.5	P	1~9	0~9
Case 32	Q	1~9	0~9
Case 38	R	1~9	0~9
Case 48	S	1~9	0~9
EV case	X	1~9	0~9
Other	Y	1~9	0~9

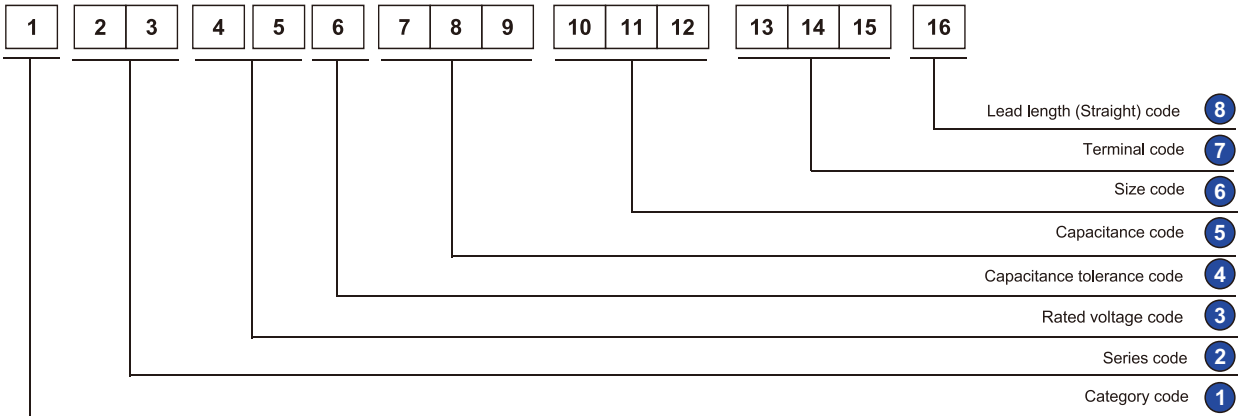
### 6 Size code

Diameter	code 10	code 11	code 12
OD=40 Case	T	1~9	0~9
OD=50 Case	U	1~9	0~9
OD=55 Case	V	1~9	0~9
OD=60 Case	W	1~9	0~9
OD=63.5 Case	1	1~9	0~9
OD=65 Case	2	1~9	0~9
OD=76 Case	3	1~9	0~9
OD=85 Case	4	1~9	0~9
OD=86 Case	5	1~9	0~9
OD=96 Case	6	1~9	0~9
OD=106 Case	7	1~9	0~9
OD=115 Case	8	1~9	0~9
OD=116 Case	9	1~9	0~9
OD=136 Case	0	1~9	0~9



# Metallized Polypropylene / Polyester Film Capacitors

## Part numbering system



7 Terminal code

Lead /Terminal Type	code 13
2 lead for long	L
2 lead for straight cut	2
2 lead for forming cut	E
4 lead for forming cut	4
6 lead for forming cut	6
Male terminals	M
Female terminals	F
Thread Stud	A
Thread Insert	B
Thread Stud + Mounting	C
Thread Insert + Mounting	J
Three Phase Screw	D
Fast On	P
Fast On + Stud	Q
one AMP 187# per side	K
Two AMP 187# per side	Y
one AMP 250# per side	G
Two AMP 250# per side	H
Style S	S
Style N	N
Style W	W
Style U	U
Axial Lead	X
Taping Forming	T
Taping straight	V
EV terminals	R

7 Terminal code 2

Lead space	code 14
5.0	A
7.5	B
10	C
12.5	D
15	E
22.5	F
27.5	G
30.0	H
32.5	J
37.5	K
42.5	L
52.5	M
32	P
45	Q
50	R
60	S
16	T
18	U
20	V
25	W
35	X
N/A	N

7 Terminal code 3

Lead Ipsilateral	code 15
5.1	A
10.2	B
7.5	C
12.7	G
20.3	D
NA	L

Terminal size	code 15
M5	5
M6	6
M8	8
M10	H
M12	J
M16	K
Fast On 2+2	E
Fast On 4+4	F
Fast On 2+2+2	M
Fast On 2+3+4	N

Total Terminals	code 15
2	Q
4	R
6	S
8	T
10	U
12	V
14	W

8 Lead /Terminal length code

Lead length	code 16
20mm min	L
35mm min	B
3.2mm	1
3.5mm	2
4mm	3
5mm	5
7mm	7
Taping	T
N/A	N

8 Lead /Terminal length code

Lead length	code 16
P1 = 16~24 P2 = 6	E
P1 = 17~25 P2 = 7	F
P1 = 21~29 P2 = 11	G
P1 = 22~30 P2 = 12	H
P1 = 30~38 P2 = 20	J
P1 = 31~39 P2 = 21	K
P1 = 35~43 P2 = 25	L
P1 = 36~44 P2 = 26	M
P1 = 56~66 P2 = 37	P
P1 = 57~67 P2 = 38	Q
P1 = 70~80 P2 = 51	R
P1 = 71~81 P2 = 52	S

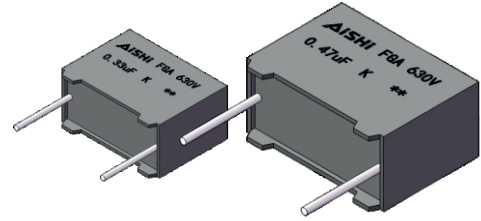
Bottom bolt	code 16
Bottom M8*10	C
Bottom M12*16	D
None bottom	E

# Metallized Polypropylene Film Capacitor (Plastic Case) PFC Applications

## FGA Series

### Overview

The FGA series is constructed of metallized polypropylene film encapsulated in plastic cases, sealed with epoxy resin. They are suitable for high frequency and PFC applications.



### Applications

- Power supplies
- Power factor correction
- Ballasts and compact lamps
- Inverter

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-16
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +105°C
Rated Voltage	450Vdc ~ 630Vdc
Capacitance Range	0.01μF ~ 3.3μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0kVac 50 Hz for 10s at +25°C
Insulation Resistance	>30,000 MΩ (C≤0.33μF) at 100VDC 1 minute at +25°C >10,000 MΩ (C>0.33μF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Leads	Tinned copper wires or Copper-clad steel wires
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2% Test duration : 56 days Capacitance change :≤±5% DF change (Δtgδ):≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +105°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change :≤±5% DF change (Δtgδ):≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Plastic Case) PFC Applications

## FGA Series

### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
450	220	0.10	13.0	11.0	5.0	10.0	25.0	250	0.6	FGA2WK104C132CL5
450	220	0.15	13.0	11.0	5.0	10.0	37.5	250	0.6	FGA2WK154C132CL5
450	220	0.22	13.0	11.0	5.0	10.0	55.0	250	0.6	FGA2WK224C132CL5
450	220	0.33	13.0	12.0	6.0	10.0	82.5	250	0.6	FGA2WK334C162CL5
450	220	0.39	13.0	13.0	7.0	10.0	97.5	250	0.6	FGA2WK394C242CL5
450	220	0.47	13.0	13.0	7.0	10.0	117.5	250	0.6	FGA2WK474C242CL5
450	220	0.56	13.0	14.0	8.0	10.0	140.0	250	0.6	FGA2WK564C262CL5
450	220	0.68	13.0	16.0	8.0	10.0	170.0	250	0.6	FGA2WK684C272CL5
450	220	0.82	13.0	19.0	10.0	10.0	205.0	250	0.6	FGA2WK824C332CL5
450	220	1.0	13.0	19.0	10.0	10.0	250.0	250	0.6	FGA2WK105C332CL5
450	220	0.10	18.0	11.0	5.0	15.0	16.0	160	0.6	FGA2WK104E142EL5
450	220	0.15	18.0	11.0	5.0	15.0	24.0	160	0.6	FGA2WK154E142EL5
450	220	0.22	18.0	12.0	6.0	15.0	35.2	160	0.6	FGA2WK224E172EL5
450	220	0.33	18.0	17.5	6.0	15.0	52.8	160	0.6	FGA2WK334E192EL5
450	220	0.47	18.0	13.5	7.5	15.0	75.2	160	0.8	FGA2WK474E292EL5
450	220	0.47	18.0	17.5	6.0	15.0	75.2	160	0.6	FGA2WK474E192EL5
450	220	0.47	18.0	12.5	9.0	15.0	75.2	160	0.8	FGA2WK474E362EL5
450	220	0.68	18.0	17.5	6.0	15.0	108.8	160	0.6	FGA2WK684E192EL5
450	220	0.68	18.0	14.5	8.5	15.0	108.8	160	0.8	FGA2WK684E342EL5
450	220	0.68	18.0	12.0	13.0	15.0	108.8	160	0.8	FGA2WK684E572EL5
450	220	0.82	18.0	14.5	8.5	15.0	131.2	160	0.8	FGA2WK824E342EL5
450	220	0.82	18.0	12.0	13.0	15.0	131.2	160	0.8	FGA2WK824E572EL5
450	220	1.0	18.0	16.0	10.0	15.0	160.0	160	0.8	FGA2WK105E432EL5
450	220	1.5	18.0	19.0	11.0	15.0	240.0	160	0.8	FGA2WK155E472EL5
450	220	2.2	26.0	19.0	10.0	22.5	220.0	100	0.6	FGA2WK225F242FL5
450	220	3.3	26.0	23.0	13.0	22.5	330.0	100	0.8	FGA2WK335F292FL5
550	250	0.10	13.0	11.0	5.0	10.0	30.0	300	0.6	FGA2JK104C132CL5
550	250	0.15	13.0	12.0	6.0	10.0	45.0	300	0.6	FGA2JK154C162CL5
550	250	0.22	13.0	13.0	7.0	10.0	66.0	300	0.6	FGA2JK224C242CL5
550	250	0.33	13.0	14.0	8.0	10.0	99.0	300	0.6	FGA2JK334C262CL5
550	250	0.47	13.0	16.0	8.0	10.0	141.0	300	0.6	FGA2JK474C272CL5
550	250	0.10	18.0	11.0	5.0	15.0	20.0	200	0.6	FGA2JK104E142EL5
550	250	0.15	18.0	11.0	5.0	15.0	30.0	200	0.6	FGA2JK154E142EL5
550	250	0.22	18.0	12.0	6.0	15.0	44.0	200	0.6	FGA2JK224E172EL5
550	250	0.33	18.0	17.5	6.0	15.0	66.0	200	0.6	FGA2JK334E192EL5
550	250	0.33	18.0	13.5	7.5	15.0	66.0	200	0.8	FGA2JK334E292EL5
550	250	0.33	18.0	12.5	9.0	15.0	66.0	200	0.8	FGA2JK334E362EL5
550	250	0.47	18.0	14.5	8.5	15.0	94.0	200	0.8	FGA2JK474E342EL5
550	250	0.47	18.0	18.0	7.0	15.0	94.0	200	0.8	FGA2JK474E262EL5
550	250	0.47	18.0	12.0	13.0	15.0	94.0	200	0.8	FGA2JK474E572EL5
550	250	0.68	18.0	16.0	10.0	15.0	136.0	200	0.8	FGA2JK684E432EL5
550	250	0.82	18.0	19.0	11.0	15.0	164.0	200	0.8	FGA2JK824E472EL5
550	250	1.00	18.0	19.0	11.0	15.0	200.0	200	0.8	FGA2JK105E472EL5
550	250	1.50	26.0	20.0	11.0	22.5	180.0	120	0.8	FGA2JK155F262FL5
550	250	2.2	26.0	23.0	13.0	22.5	264.0	120	0.8	FGA2JK225F292FL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## Metallized Polypropylene Film Capacitor (Plastic Case) PFC Applications

### FGA Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
630	275	0.010	13.0	11.0	5.0	10.0	4.0	400	0.6	FGA2LK103C132CL5
630	275	0.015	13.0	11.0	5.0	10.0	6.0	400	0.6	FGA2LK153C132CL5
630	275	0.022	13.0	11.0	5.0	10.0	8.8	400	0.6	FGA2LK223C132CL5
630	275	0.033	13.0	11.0	5.0	10.0	13.2	400	0.6	FGA2LK333C132CL5
630	275	0.047	13.0	11.0	5.0	10.0	18.8	400	0.6	FGA2LK473C132CL5
630	275	0.068	13.0	12.0	6.0	10.0	27.2	400	0.6	FGA2LK683C162CL5
630	275	0.082	13.0	12.0	6.0	10.0	32.8	400	0.6	FGA2LK823C162CL5
630	275	0.10	13.0	12.0	6.0	10.0	40.0	400	0.6	FGA2LK104C162CL5
630	275	0.047	18.0	11.0	5.0	15.0	11.8	250	0.6	FGA2LK473E142EL5
630	275	0.056	18.0	11.0	5.0	15.0	14.0	250	0.6	FGA2LK563E142EL5
630	275	0.068	18.0	11.0	5.0	15.0	17.0	250	0.6	FGA2LK683E142EL5
630	275	0.082	18.0	11.0	5.0	15.0	20.5	250	0.6	FGA2LK823E142EL5
630	275	0.10	18.0	11.0	5.0	15.0	25.0	250	0.6	FGA2LK104E142EL5
630	275	0.15	18.0	12.0	6.0	15.0	37.5	250	0.6	FGA2LK154E172EL5
630	275	0.22	18.0	17.5	6.0	15.0	55.0	250	0.6	FGA2LK224E192EL5
630	275	0.22	18.0	13.5	7.5	15.0	55.0	250	0.8	FGA2LK224E292EL5
630	275	0.22	18.0	12.5	9.0	15.0	55.0	250	0.8	FGA2LK224E362EL5
630	275	0.33	18.0	18.0	7.0	15.0	82.5	250	0.8	FGA2LK334E262EL5
630	275	0.33	18.0	14.5	8.5	15.0	82.5	250	0.8	FGA2LK334E342EL5
630	275	0.33	18.0	12.5	9.0	15.0	82.5	250	0.8	FGA2LK334E362EL5
630	275	0.47	18.0	18.0	7.0	15.0	117.5	250	0.8	FGA2LK474E262EL5
630	275	0.47	18.0	16.0	10.0	15.0	117.5	250	0.8	FGA2LK474E432EL5
630	275	0.47	18.0	12.0	13.0	15.0	117.5	250	0.8	FGA2LK474E572EL5
630	275	0.68	18.0	19.0	11.0	15.0	170.0	250	0.8	FGA2LK684E472EL5
630	275	0.82	26.0	19.0	10.0	22.5	131.2	160	0.8	FGA2LK824F242FL5
630	275	1.0	26.0	20.0	11.0	22.5	160.0	160	0.8	FGA2LK105F262FL5

\* Customized products are available by request, contact us for more details.

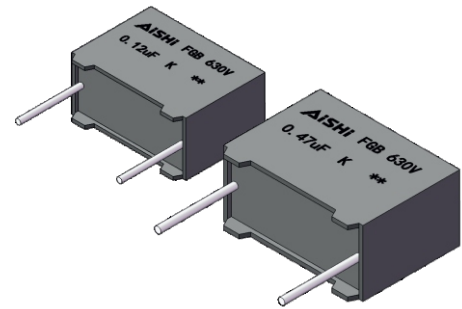
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Plastic Case) DC and Pulse Applications

## FGB Series

### Overview

The FGB series is constructed of metallized polypropylene film encapsulated in plastic cases, sealed with epoxy resin. They are suitable for high current at high frequency applications.



### Applications

- High frequency applications
- Pulse circuits
- Electronic ballasts
- Compact lamps

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-16
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +105°C
Rated Voltage	100Vdc ~ 630Vdc
Capacitance Range	0.01μF ~ 33.0μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	> 30,000 MΩ (C≤0.33uF)at 100VDC 1 minute at +25°C > 10,000 MΩ (C > 0.33uF)at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad steel wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2% Test duration : 56 days Capacitance change : ≤±5% DF change (Δtgδ): ≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +105°C ±2°C Voltage applied: 1.25 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change : ≤±5% DF change (Δtgδ): ≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Plastic Case) DC and Pulse Applications

## FGB Series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
100	50	0.10	13.0	11.0	5.0	10.0	18.0	180	0.6	FGB1KK104C132CL5
100	50	0.12	13.0	11.0	5.0	10.0	21.6	180	0.6	FGB1KK124C132CL5
100	50	0.15	13.0	11.0	5.0	10.0	27.0	180	0.6	FGB1KK154C132CL5
100	50	0.18	13.0	12.0	6.0	10.0	32.4	180	0.6	FGB1KK184C162CL5
100	50	0.22	13.0	12.0	6.0	10.0	39.6	180	0.6	FGB1KK224C162CL5
100	50	0.27	18.0	12.0	6.0	15.0	27.0	100	0.6	FGB1KK274E172EL5
100	50	0.33	18.0	12.0	6.0	15.0	33.0	100	0.6	FGB1KK334E172EL5
100	50	0.39	18.0	13.5	7.5	15.0	39.0	100	0.8	FGB1KK394E292EL5
100	50	0.47	18.0	13.5	7.5	15.0	47.0	100	0.8	FGB1KK474E292EL5
100	50	0.56	18.0	14.5	8.5	15.0	56.0	100	0.8	FGB1KK564E342EL5
100	50	0.68	18.0	14.5	8.5	15.0	68.0	100	0.8	FGB1KK684E342EL5
100	50	0.82	18.0	16.0	10.0	15.0	82.0	100	0.8	FGB1KK824E432EL5
100	50	1.0	18.0	16.0	10.0	15.0	100.0	100	0.8	FGB1KK105E432EL5
100	50	1.2	26.0	17.0	8.5	22.5	72.0	60	0.8	FGB1KK125F202FL5
100	50	1.5	26.0	19.0	10.0	22.5	90.0	60	0.8	FGB1KK155F242FL5
100	50	1.8	26.0	19.0	10.0	22.5	108.0	60	0.8	FGB1KK185F242FL5
100	50	2.2	32.0	20.0	11.0	27.5	110.0	50	0.8	FGB1KK225G182GL5
100	50	2.7	32.0	20.0	11.0	27.5	135.0	50	0.8	FGB1KK275G182GL5
100	50	3.3	32.0	22.0	13.0	27.5	165.0	50	0.8	FGB1KK335G212GL5
100	50	3.9	32.0	22.0	13.0	27.5	195.0	50	0.8	FGB1KK395G212GL5
100	50	4.7	32.0	24.5	13.0	27.5	235.0	50	0.8	FGB1KK475G222GL5
100	50	5.6	32.0	28.0	14.0	27.5	280.0	50	0.8	FGB1KK565G262GL5
100	50	68	32.0	33.0	18.0	27.5	3400.0	50	0.8	FGB1KK685G342GL5
100	50	82	32.0	33.0	18.0	27.5	4100.0	50	0.8	FGB1KK825G342GL5
100	50	10	32.0	31.0	21.0	27.5	500.0	50	0.8	FGB1KK106G372GL5
100	50	10	32.0	37.0	22.0	27.5	500.0	50	0.8	FGB1KK106G402GL5
100	50	12	32.0	37.0	22.0	27.5	600.0	50	0.8	FGB1KK126G402GL5
100	50	12	42.5	32.0	19.0	37.5	420.0	35	1.0	FGB1KK126K212KL5
100	50	15	42.5	40.0	20.0	37.5	525.0	35	1.0	FGB1KK156K242KL5
100	50	18	42.5	40.0	20.0	37.5	630.0	35	1.0	FGB1KK186K242KL5
100	50	22	42.5	44.0	24.0	37.5	770.0	35	1.0	FGB1KK226K322KL5
100	50	27	42.5	45.0	30.0	37.5	945.0	35	1.0	FGB1KK276K422KL5
100	50	33	42.5	45.0	30.0	37.5	1155.0	35	1.0	FGB1KK336K422KL5
250	160	0	13.0	11.0	5.0	10.0	18.2	550	0.6	FGB2EK333C132CL5
250	160	0	13.0	11.0	5.0	10.0	21.5	550	0.6	FGB2EK393C132CL5
250	160	0	13.0	11.0	5.0	10.0	25.9	550	0.6	FGB2EK473C132CL5
250	160	0	13.0	11.0	5.0	10.0	30.8	550	0.6	FGB2EK563C132CL5
250	160	0	13.0	11.0	5.0	10.0	37.4	550	0.6	FGB2EK683C132CL5
250	160	0	13.0	11.0	5.0	10.0	45.1	550	0.6	FGB2EK823C132CL5
250	160	0	13.0	11.0	5.0	10.0	55.0	550	0.6	FGB2EK104C132CL5
250	160	0	13.0	12.0	6.0	10.0	66.0	550	0.6	FGB2EK124C162CL5
250	160	0	13.0	12.0	6.0	10.0	82.5	550	0.6	FGB2EK154C162CL5
250	160	0	18.0	11.0	5.0	15.0	54.0	300	0.6	FGB2EK184E142EL5
250	160	0	18.0	11.0	5.0	15.0	66.0	300	0.6	FGB2EK224E142EL5
250	160	0	18.0	12.0	6.0	15.0	81.0	300	0.6	FGB2EK274E172EL5

\* Customized products are available by request, contact us for more details.

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# Metallized Polypropylene Film Capacitor (Plastic Case)

## DC and Pulse Applications

### FGB Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
250	160	0.33	18.0	12.0	6.0	15.0	99.0	300	0.6	FGB2EK334E172EL5
250	160	0.39	18.0	13.5	7.5	15.0	117.0	300	0.8	FGB2EK394E292EL5
250	160	0.47	18.0	13.5	7.5	15.0	141.0	300	0.8	FGB2EK474E292EL5
250	160	0.56	18.0	13.5	7.5	15.0	168.0	300	0.8	FGB2EK564E292EL5
250	160	0.68	18.0	14.5	8.5	15.0	204.0	300	0.8	FGB2EK684E342EL5
250	160	0.82	18.0	16.0	10.0	15.0	246.0	300	0.8	FGB2EK824E432EL5
250	160	1.2	18.0	16.0	10.0	15.0	360.0	300	0.8	FGB2EK105E432EL5
250	160	1.2	18.0	19.0	11.0	15.0	360.0	300	0.8	FGB2EK125E472EL5
250	160	1.2	26.0	17.0	8.5	22.5	150.0	125	0.8	FGB2EK125F202FL5
250	160	1.5	26.0	19.0	10.0	22.5	187.5	125	0.8	FGB2EK155F242FL5
250	160	1.8	26.0	19.0	10.0	22.5	225.0	125	0.8	FGB2EK185F242FL5
250	160	2.2	26.0	20.0	11.0	22.5	275.0	125	0.8	FGB2EK225F262FL5
250	160	2.7	26.0	23.0	13.0	22.5	337.5	125	0.8	FGB2EK275F292FL5
250	160	3.3	26.0	23.0	13.0	22.5	412.5	125	0.8	FGB2EK335F292FL5
250	160	3.9	32.0	22.0	13.0	27.5	390.0	100	0.8	FGB2EK395G212GL5
250	160	4.7	32.0	24.5	13.0	27.5	470.0	100	0.8	FGB2EK475G222GL5
250	160	5.6	32.0	28.0	14.0	27.5	560.0	100	0.8	FGB2EK565G262GL5
250	160	6.8	32.0	33.0	18.0	27.5	680.0	100	0.8	FGB2EK685G342GL5
250	160	8.2	32.0	33.0	18.0	27.5	820.0	100	0.8	FGB2EK825G342GL5
250	160	10	32.0	37.0	22.0	27.5	1000.0	100	0.8	FGB2EK106G402GL5
250	160	12	42.5	32.0	19.0	37.5	480.0	40	1.0	FGB2EK126K212KL5
250	160	15	42.5	40.0	20.0	37.5	600.0	40	1.0	FGB2EK156K242KL5
250	160	22	42.5	44.0	24.0	37.5	880.0	40	1.0	FGB2EK226K322KL5
250	160	30	42.5	45.0	30.0	37.5	1200.0	40	1.0	FGB2EK306K422KL5
400	220	0.015	13.0	11.0	5.0	10.0	18.0	1200	0.6	FGB2GK153C132CL5
400	220	0.018	13.0	11.0	5.0	10.0	21.6	1200	0.6	FGB2GK183C132CL5
400	220	0.022	13.0	11.0	5.0	10.0	26.4	1200	0.6	FGB2GK223C132CL5
400	220	0.027	13.0	11.0	5.0	10.0	32.4	1200	0.6	FGB2GK273C132CL5
400	220	0.033	13.0	11.0	5.0	10.0	39.6	1200	0.6	FGB2GK333C132CL5
400	220	0.039	13.0	11.0	5.0	10.0	46.8	1200	0.6	FGB2GK393C132CL5
400	220	0.047	13.0	11.0	5.0	10.0	56.4	1200	0.6	FGB2GK473C132CL5
400	220	0.056	13.0	12.0	6.0	10.0	67.2	1200	0.6	FGB2GK563C162CL5
400	220	0.068	13.0	12.0	6.0	10.0	81.6	1200	0.6	FGB2GK683C162CL5
400	220	0.082	18.0	11.0	5.0	15.0	65.6	800	0.6	FGB2GK823E142EL5
400	220	0.10	18.0	11.0	5.0	15.0	80.0	800	0.6	FGB2GK104E142EL5
400	220	0.12	18.0	12.0	6.0	15.0	96.0	800	0.6	FGB2GK124E172EL5
400	220	0.15	18.0	12.0	6.0	15.0	120.0	800	0.6	FGB2GK154E172EL5
400	220	0.18	18.0	13.5	7.5	15.0	144.0	800	0.8	FGB2GK184E292EL5
400	220	0.22	18.0	13.5	7.5	15.0	176.0	800	0.8	FGB2GK224E292EL5
400	220	0.27	18.0	13.5	7.5	15.0	216.0	800	0.8	FGB2GK274E292EL5
400	220	0.33	18.0	14.5	8.5	15.0	264.0	800	0.8	FGB2GK334E342EL5
400	220	0.39	18.0	16.0	10.0	15.0	312.0	800	0.8	FGB2GK394E432EL5
400	220	0.47	18.0	16.0	10.0	15.0	376.0	800	0.8	FGB2GK474E432EL5
400	220	0.56	18.0	19.0	11.0	15.0	448.0	800	0.8	FGB2GK564E472EL5
400	220	0.68	26.0	19.0	10.0	22.5	204.0	300	0.8	FGB2GK684F242FL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Plastic Case) DC and Pulse Applications

## FGB Series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
400	220	0.82	26.0	19.0	10.0	22.5	246.0	300	0.8	FGB2GK824F242FL5
400	220	1.0	26.0	20.0	11.0	22.5	300.0	300	0.8	FGB2GK105F262FL5
400	220	1.2	26.0	23.0	13.0	22.5	360.0	300	0.8	FGB2GK125F292FL5
400	220	1.5	26.0	23.0	13.0	22.5	450.0	300	0.8	FGB2GK155F292FL5
400	220	1.8	32.0	22.0	13.0	27.5	234.0	130	0.8	FGB2GK185G212GL5
400	220	2.2	32.0	24.5	13.0	27.5	286.0	130	0.8	FGB2GK225G222GL5
400	220	2.7	32.0	28.0	14.0	27.5	351.0	130	0.8	FGB2GK275G262GL5
400	220	3.3	32.0	33.0	18.0	27.5	429.0	130	0.8	FGB2GK335G342GL5
400	220	3.9	32.0	33.0	18.0	27.5	507.0	130	0.8	FGB2GK395G342GL5
400	220	4.7	32.0	37.0	22.0	27.5	611.0	130	0.8	FGB2GK475G402GL5
400	220	5.6	42.5	32.0	19.0	37.5	392.0	70	1.0	FGB2GK565K212KL5
400	220	6.8	42.5	40.0	20.0	37.5	476.0	70	1.0	FGB2GK685K242KL5
400	220	8.2	42.5	40.0	20.0	37.5	574.0	70	1.0	FGB2GK825K242KL5
400	220	10	42.5	44.0	24.0	37.5	700.0	70	1.0	FGB2GK106K322KL5
400	220	12	42.5	45.0	30.0	37.5	840.0	70	1.0	FGB2GK126K422KL5
630	250	0.010	13.0	11.0	5.0	10.0	15.0	1500	0.6	FGB2LK103C132CL5
630	250	0.012	13.0	11.0	5.0	10.0	18.0	1500	0.6	FGB2LK123C132CL5
630	250	0.015	13.0	11.0	5.0	10.0	22.5	1500	0.6	FGB2LK153C132CL5
630	250	0.018	13.0	11.0	5.0	10.0	27.0	1500	0.6	FGB2LK183C132CL5
630	250	0.022	13.0	12.0	6.0	10.0	33.0	1500	0.6	FGB2LK223C162CL5
630	250	0.027	18.0	11.0	5.0	15.0	27.0	1000	0.6	FGB2LK273E142EL5
630	250	0.033	18.0	11.0	5.0	15.0	33.0	1000	0.6	FGB2LK333E142EL5
630	250	0.039	18.0	11.0	5.0	15.0	39.0	1000	0.6	FGB2LK393E142EL5
630	250	0.047	18.0	11.0	5.0	15.0	47.0	1000	0.6	FGB2LK473E142EL5
630	250	0.056	18.0	11.0	5.0	15.0	56.0	1000	0.6	FGB2LK563E142EL5
630	250	0.068	18.0	12.0	6.0	15.0	68.0	1000	0.6	FGB2LK683E172EL5
630	250	0.082	18.0	12.0	6.0	15.0	82.0	1000	0.6	FGB2LK823E172EL5
630	250	0.10	18.0	13.5	7.5	15.0	100.0	1000	0.8	FGB2LK104E292EL5
630	250	0.12	18.0	13.5	7.5	15.0	120.0	1000	0.8	FGB2LK124E292EL5
630	250	0.15	18.0	14.5	8.5	15.0	150.0	1000	0.8	FGB2LK154E342EL5
630	250	0.18	18.0	16.0	10.0	15.0	180.0	1000	0.8	FGB2LK184E432EL5
630	250	0.22	18.0	16.0	10.0	15.0	220.0	1000	0.8	FGB2LK224E432EL5
630	250	0.27	18.0	19.0	11.0	15.0	270.0	1000	0.8	FGB2LK274E472EL5
630	250	0.33	18.0	19.0	11.0	15.0	330.0	1000	0.8	FGB2LK334E472EL5
630	250	0.39	26.0	19.0	10.0	22.5	156.0	400	0.8	FGB2LK394F242FL5
630	250	0.47	26.0	20.0	11.0	22.5	188.0	400	0.8	FGB2LK474F262FL5
630	250	0.56	26.0	20.0	11.0	22.5	224.0	400	0.8	FGB2LK564F262FL5
630	250	0.68	26.0	23.0	13.0	22.5	272.0	400	0.8	FGB2LK684F292FL5
630	250	0.82	32.0	22.0	13.0	27.5	147.6	180	0.8	FGB2LK824G212GL5
630	250	10	32.0	22.0	13.0	27.5	1800.0	180	0.8	FGB2LK105G212GL5
630	250	12	32.0	28.0	14.0	27.5	2160.0	180	0.8	FGB2LK125G262GL5
630	250	1.5	32.0	28.0	14.0	27.5	270.0	180	0.8	FGB2LK155G262GL5
630	250	1.8	32.0	33.0	18.0	27.5	324.0	180	0.8	FGB2LK185G342GL5
630	250	2.2	32.0	33.0	18.0	27.5	396.0	180	0.8	FGB2LK225G342GL5
630	250	2.7	32.0	37.0	22.0	27.5	486.0	180	0.8	FGB2LK275G402GL5

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## Metallized Polypropylene Film Capacitor (Plastic Case) DC and Pulse Applications

### FGB Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
630	250	3.3	42.5	32.0	19.0	37.5	297.0	90	1.0	FGB2LK335K212KL5
630	250	3.9	42.5	40.0	20.0	37.5	351.0	90	1.0	FGB2LK395K242KL5
630	250	4.7	42.5	40.0	20.0	37.5	423.0	90	1.0	FGB2LK475K242KL5
630	250	5.6	42.5	44.0	24.0	37.5	504.0	90	1.0	FGB2LK565K322KL5
630	250	6.8	42.5	45.0	30.0	37.5	612.0	90	1.0	FGB2LK685K422KL5

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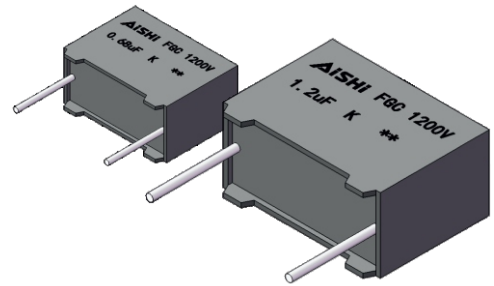
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# Double Metallized Polypropylene Film Capacitor (Plastic Case) DC/Pulse/High Frequency Applications

## FGC Series

### Overview

The FGC series is constructed of metallized polypropylene film and double sided metallized film as electrodes with radial leads of tinned wires. The capacitor is encapsulated in plastic cases, sealed with thermosetting resin material meeting the UL94V-0 requirement.



### Applications

- Monitors (S-correction and flyback tuning)
- Ballasts and compact lamps
- Snubber and silicon-controlled rectifier
- Power supplies

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications
- Negative temperature coefficient of capacitance

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-16
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +105°C
Rated Voltage	630Vdc ~ 2000Vdc
Capacitance Range	0.001μF ~ 4.7μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0kVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T = +85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH . RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2% Test duration : 56 days Capacitance change : ±3% DF change (Δtgδ): ≤ 10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +105°C ±2°C Voltage applied: 1.25 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change : ±3% DF change (Δtgδ): ≤ 10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit

# Double Metallized Polypropylene Film Capacitor (Plastic Case) DC/Pulse/High Frequency Applications

## FGC Series

### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
630	400	0.0039	13.0	9.0	4.0	10.0	11.7	3000	0.6	FGC2LK392C112CL5
630	400	0.0047	13.0	9.0	4.0	10.0	14.1	3000	0.6	FGC2LK472C112CL5
630	400	0.0056	13.0	9.0	4.0	10.0	16.8	3000	0.6	FGC2LK562C112CL5
630	400	0.0068	13.0	9.0	4.0	10.0	20.4	3000	0.6	FGC2LK682C112CL5
630	400	0.0082	13.0	9.0	4.0	10.0	24.6	3000	0.6	FGC2LK822C112CL5
630	400	0.010	13.0	11.0	5.0	10.0	30.0	3000	0.6	FGC2LK103C132CL5
630	400	0.012	13.0	11.0	5.0	10.0	36.0	3000	0.6	FGC2LK123C132CL5
630	400	0.015	13.0	12.0	6.0	10.0	45.0	3000	0.6	FGC2LK153C162CL5
630	400	0.018	13.0	12.0	6.0	10.0	54.0	3000	0.6	FGC2LK183C162CL5
630	400	0.020	13.0	13.0	7.0	10.0	60.0	3000	0.6	FGC2LK203C242CL5
630	400	0.022	13.0	13.0	7.0	10.0	66.0	3000	0.6	FGC2LK223C242CL5
630	400	0.010	18.0	11.0	5.0	15.0	25.0	2500	0.8	FGC2LK103E142EL5
630	400	0.012	18.0	11.0	5.0	15.0	30.0	2500	0.8	FGC2LK123E142EL5
630	400	0.015	18.0	11.0	5.0	15.0	37.5	2500	0.8	FGC2LK153E142EL5
630	400	0.018	18.0	11.0	5.0	15.0	45.0	2500	0.8	FGC2LK183E142EL5
630	400	0.02	18.0	11.0	5.0	15.0	50.0	2500	0.8	FGC2LK203E142EL5
630	400	0.022	18.0	11.0	5.0	15.0	55.0	2500	0.8	FGC2LK223E142EL5
630	400	0.027	18.0	12.0	6.0	15.0	67.5	2500	0.8	FGC2LK273E172EL5
630	400	0.033	18.0	12.0	6.0	15.0	82.5	2500	0.8	FGC2LK333E172EL5
630	400	0.039	18.0	12.0	6.0	15.0	97.5	2500	0.8	FGC2LK393E172EL5
630	400	0.047	18.0	13.5	7.5	15.0	117.5	2500	0.8	FGC2LK473E292EL5
630	400	0.056	18.0	13.5	7.5	15.0	140.0	2500	0.8	FGC2LK563E292EL5
630	400	0.068	18.0	14.5	8.5	15.0	170.0	2500	0.8	FGC2LK683E342EL5
630	400	0.082	18.0	16.0	10.0	15.0	205.0	2500	0.8	FGC2LK823E432EL5
630	400	0.10	18.0	16.0	10.0	15.0	250.0	2500	0.8	FGC2LK104E432EL5
630	400	0.12	18.0	19.0	11.0	15.0	300.0	2500	0.8	FGC2LK124E472EL5
630	400	0.12	26.0	16.5	7.0	22.5	180.0	1500	0.8	FGC2LK124F172FL5
630	400	0.15	26.0	17.0	8.5	22.5	225.0	1500	0.8	FGC2LK154F202FL5
630	400	0.18	26.0	17.0	8.5	22.5	270.0	1500	0.8	FGC2LK184F202FL5
630	400	0.22	26.0	19.0	10.0	22.5	330.0	1500	0.8	FGC2LK224F242FL5
630	400	0.27	26.0	20.0	11.0	22.5	405.0	1500	0.8	FGC2LK274F262FL5
630	400	0.33	26.0	20.0	11.0	22.5	495.0	1500	0.8	FGC2LK334F262FL5
630	400	0.39	26.0	22.0	12.0	22.5	585.0	1500	0.8	FGC2LK394F272FL5
630	400	0.47	32.0	22.0	13.0	27.5	423.0	900	0.8	FGC2LK474G212GL5
630	400	0.56	32.0	22.0	13.0	27.5	504.0	900	0.8	FGC2LK564G212GL5
630	400	0.68	32.0	24.5	13.0	27.5	612.0	900	0.8	FGC2LK684G222GL5
630	400	0.82	32.0	28.0	14.0	27.5	738.0	900	0.8	FGC2LK824G262GL5
630	400	1.0	32.0	33.0	18.0	27.5	900.0	900	0.8	FGC2LK105G342GL5
630	400	1.2	32.0	33.0	18.0	27.5	1080.0	900	0.8	FGC2LK125G342GL5
630	400	1.5	32.0	37.0	22.0	27.5	1350.0	900	0.8	FGC2LK155G402GL5
630	400	1.8	32.0	37.0	22.0	27.5	1620.0	900	0.8	FGC2LK185G402GL5
630	400	2.2	42.5	40.0	20.0	37.5	1100.0	500	1.0	FGC2LK225K242KL5
630	400	2.7	42.5	40.0	20.0	37.5	1350.0	500	1.0	FGC2LK275K242KL5
630	400	3.3	42.5	44.0	24.0	37.5	1650.0	500	1.0	FGC2LK335K322KL5
630	400	3.9	42.5	45.0	30.0	37.5	1950.0	500	1.0	FGC2LK395K422KL5
630	400	4.7	42.5	45.0	30.0	37.5	2350.0	500	1.0	FGC2LK475K422KL5

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# Double Metallized Polypropylene Film Capacitor (Plastic Case) DC/Pulse/High Frequency Applications

## FGC Series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
1000	500	0.0039	13.0	9.0	4.0	10.0	11.7	3000	0.6	FGC3KK392C112CL5
1000	500	0.0047	13.0	9.0	4.0	10.0	14.1	3000	0.6	FGC3KK472C112CL5
1000	500	0.0056	13.0	9.0	4.0	10.0	16.8	3000	0.6	FGC3KK562C112CL5
1000	500	0.0068	13.0	9.0	4.0	10.0	20.4	3000	0.6	FGC3KK682C112CL5
1000	500	0.0082	13.0	9.0	4.0	10.0	24.6	3000	0.6	FGC3KK822C112CL5
1000	500	0.010	13.0	11.0	5.0	10.0	30.0	3000	0.6	FGC3KK103C132CL5
1000	500	0.012	13.0	11.0	5.0	10.0	36.0	3000	0.6	FGC3KK123C132CL5
1000	500	0.015	13.0	12.0	6.0	10.0	45.0	3000	0.6	FGC3KK153C162CL5
1000	500	0.018	13.0	12.0	6.0	10.0	54.0	3000	0.6	FGC3KK183C162CL5
1000	500	0.020	13.0	13.0	7.0	10.0	60.0	3000	0.6	FGC3KK203C242CL5
1000	500	0.022	13.0	13.0	7.0	10.0	66.0	3000	0.6	FGC3KK223C242CL5
1000	500	0.010	18.0	11.0	5.0	15.0	25.0	2500	0.8	FGC3KK103E142EL5
1000	500	0.012	18.0	11.0	5.0	15.0	30.0	2500	0.8	FGC3KK123E142EL5
1000	500	0.015	18.0	11.0	5.0	15.0	37.5	2500	0.8	FGC3KK153E142EL5
1000	500	0.018	18.0	11.0	5.0	15.0	45.0	2500	0.8	FGC3KK183E142EL5
1000	500	0.020	18.0	11.0	5.0	15.0	50.0	2500	0.8	FGC3KK203E142EL5
1000	500	0.022	18.0	11.0	5.0	15.0	55.0	2500	0.8	FGC3KK223E142EL5
1000	500	0.027	18.0	12.0	6.0	15.0	67.5	2500	0.8	FGC3KK273E172EL5
1000	500	0.033	18.0	12.0	6.0	15.0	82.5	2500	0.8	FGC3KK333E172EL5
1000	500	0.039	18.0	12.0	6.0	15.0	97.5	2500	0.8	FGC3KK393E172EL5
1000	500	0.047	18.0	13.5	7.5	15.0	117.5	2500	0.8	FGC3KK473E292EL5
1000	500	0.056	18.0	13.5	7.5	15.0	140.0	2500	0.8	FGC3KK563E292EL5
1000	500	0.068	18.0	14.5	8.5	15.0	170.0	2500	0.8	FGC3KK683E342EL5
1000	500	0.082	18.0	16.0	10.0	15.0	205.0	2500	0.8	FGC3KK823E432EL5
1000	500	0.10	18.0	16.0	10.0	15.0	250.0	2500	0.8	FGC3KK104E432EL5
1000	500	0.12	18.0	19.0	11.0	15.0	300.0	2500	0.8	FGC3KK124E472EL5
1000	500	0.12	26.0	16.5	7.0	22.5	180.0	1500	0.8	FGC3KK124F172FL5
1000	500	0.15	26.0	17.0	8.5	22.5	225.0	1500	0.8	FGC3KK154F202FL5
1000	500	0.18	26.0	17.0	8.5	22.5	270.0	1500	0.8	FGC3KK184F202FL5
1000	500	0.22	26.0	19.0	10.0	22.5	330.0	1500	0.8	FGC3KK224F242FL5
1000	500	0.27	26.0	20.0	11.0	22.5	405.0	1500	0.8	FGC3KK274F262FL5
1000	500	0.33	26.0	20.0	11.0	22.5	495.0	1500	0.8	FGC3KK334F262FL5
1000	500	0.39	26.0	22.0	12.0	22.5	585.0	1500	0.8	FGC3KK394F272FL5
1000	500	0.47	32.0	22.0	13.0	27.5	423.0	900	0.8	FGC3KK474G212GL5
1000	500	0.56	32.0	22.0	13.0	27.5	504.0	900	0.8	FGC3KK564G212GL5
1000	500	0.68	32.0	24.5	13.0	27.5	612.0	900	0.8	FGC3KK684G222GL5
1000	500	0.82	32.0	28.0	14.0	27.5	738.0	900	0.8	FGC3KK824G262GL5
1000	500	1.0	32.0	33.0	18.0	27.5	900.0	900	0.8	FGC3KK105G342GL5
1000	500	1.2	32.0	33.0	18.0	27.5	1080.0	900	0.8	FGC3KK125G342GL5
1000	500	1.5	32.0	37.0	22.0	27.5	1350.0	900	0.8	FGC3KK155G402GL5
1000	500	1.8	32.0	37.0	22.0	27.5	1620.0	900	0.8	FGC3KK185G402GL5
1000	500	2.2	42.5	40.0	20.0	37.5	1100.0	500	1.0	FGC3KK225K242KL5
1000	500	2.7	42.5	40.0	20.0	37.5	1350.0	500	1.0	FGC3KK275K242KL5
1000	500	3.3	42.5	44.0	24.0	37.5	1650.0	500	1.0	FGC3KK335K322KL5
1000	500	3.9	42.5	45.0	30.0	37.5	1950.0	500	1.0	FGC3KK395K422KL5
1000	500	4.7	42.5	45.0	30.0	37.5	2350.0	500	1.0	FGC3KK475K422KL5

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## Double Metallized Polypropylene Film Capacitor (Plastic Case) DC/Pulse/High Frequency Applications

### FGC Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
1200	600	0.0010	13.0	9.0	4.0	10.0	4.8	4800	0.6	FGC3BK102C112CL5
1200	600	0.0012	13.0	9.0	4.0	10.0	5.8	4800	0.6	FGC3BK122C112CL5
1200	600	0.0015	13.0	9.0	4.0	10.0	7.2	4800	0.6	FGC3BK152C112CL5
1200	600	0.0018	13.0	9.0	4.0	10.0	8.6	4800	0.6	FGC3BK182C112CL5
1200	600	0.0022	13.0	9.0	4.0	10.0	10.6	4800	0.6	FGC3BK222C112CL5
1200	600	0.0027	13.0	9.0	4.0	10.0	13.0	4800	0.6	FGC3BK272C112CL5
1200	600	0.0033	13.0	9.0	4.0	10.0	15.8	4800	0.6	FGC3BK332C112CL5
1200	600	0.0039	13.0	11.0	5.0	10.0	18.7	4800	0.6	FGC3BK392C132CL5
1200	600	0.0047	13.0	11.0	5.0	10.0	22.6	4800	0.6	FGC3BK472C132CL5
1200	600	0.0056	13.0	11.0	5.0	10.0	26.9	4800	0.6	FGC3BK562C132CL5
1200	600	0.0068	13.0	11.0	5.0	10.0	32.6	4800	0.6	FGC3BK682C132CL5
1200	600	0.0082	13.0	11.0	5.0	10.0	39.4	4800	0.6	FGC3BK822C132CL5
1200	600	0.010	18.0	11.0	5.0	15.0	33.0	3300	0.8	FGC3BK103E142EL5
1200	600	0.012	18.0	11.0	5.0	15.0	39.6	3300	0.8	FGC3BK123E142EL5
1200	600	0.015	18.0	11.0	5.0	15.0	49.5	3300	0.8	FGC3BK153E142EL5
1200	600	0.018	18.0	11.0	5.0	15.0	59.4	3300	0.8	FGC3BK183E142EL5
1200	600	0.020	18.0	11.0	5.0	15.0	66.0	3300	0.8	FGC3BK203E142EL5
1200	600	0.022	18.0	12.0	6.0	15.0	72.6	3300	0.8	FGC3BK223E172EL5
1200	600	0.027	18.0	13.5	7.5	15.0	89.1	3300	0.8	FGC3BK273E292EL5
1200	600	0.033	18.0	13.5	7.5	15.0	108.9	3300	0.8	FGC3BK333E292EL5
1200	600	0.039	18.0	14.5	8.5	15.0	128.7	3300	0.8	FGC3BK393E342EL5
1200	600	0.047	26.0	16.5	7.0	22.5	103.4	2200	0.8	FGC3BK473F172FL5
1200	600	0.056	26.0	16.5	7.0	22.5	123.2	2200	0.8	FGC3BK563F172FL5
1200	600	0.068	26.0	17.0	8.5	22.5	149.6	2200	0.8	FGC3BK683F202FL5
1200	600	0.082	26.0	19.0	10.0	22.5	180.4	2200	0.8	FGC3BK823F242FL5
1200	600	0.10	26.0	19.0	10.0	22.5	220.0	2200	0.8	FGC3BK104F242FL5
1200	600	0.12	26.0	20.0	11.0	22.5	264.0	2200	0.8	FGC3BK124F262FL5
1200	600	0.15	26.0	22.0	12.0	22.5	330.0	2200	0.8	FGC3BK154F272FL5
1200	600	0.18	32.0	20.0	11.0	27.5	180.0	1000	0.8	FGC3BK184G182GL5
1200	600	0.22	32.0	22.0	13.0	27.5	220.0	1000	0.8	FGC3BK224G212GL5
1200	600	0.27	32.0	24.5	13.0	27.5	270.0	1000	0.8	FGC3BK274G222GL5
1200	600	0.33	32.0	28.0	14.0	27.5	330.0	1000	0.8	FGC3BK334G262GL5
1200	600	0.39	32.0	33.0	18.0	27.5	390.0	1000	0.8	FGC3BK394G342GL5
1200	600	0.47	32.0	33.0	18.0	27.5	470.0	1000	0.8	FGC3BK474G342GL5
1200	600	0.56	32.0	37.0	22.0	27.5	560.0	1000	0.8	FGC3BK564G402GL5
1200	600	0.68	32.0	37.0	22.0	27.5	680.0	1000	0.8	FGC3BK684G402GL5
1200	600	0.82	42.5	40.0	20.0	37.5	410.0	500	1.0	FGC3BK824K242KL5
1200	600	1.0	42.5	40.0	20.0	37.5	500.0	500	1.0	FGC3BK105K242KL5
1200	600	1.2	42.5	44.0	24.0	37.5	600.0	500	1.0	FGC3BK125K322KL5
1200	600	1.5	42.5	44.0	24.0	37.5	750.0	500	1.0	FGC3BK155K322KL5
1200	600	1.8	42.5	45.0	30.0	37.5	900.0	500	1.0	FGC3BK185K422KL5
1200	600	2.2	42.5	45.0	30.0	37.5	1100.0	500	1.0	FGC3BK225K422KL5

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# Double Metallized Polypropylene Film Capacitor (Plastic Case) DC/Pulse/High Frequency Applications

## FGC Series

### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
1600	650	0.0056	18.0	11.0	5.0	15.0	33.6	6000	0.8	FGC3WK562E142EL5
1600	650	0.0068	18.0	11.0	5.0	15.0	40.8	6000	0.8	FGC3WK682E142EL5
1600	650	0.0082	18.0	11.0	5.0	15.0	49.2	6000	0.8	FGC3WK822E142EL5
1600	650	0.010	18.0	11.0	5.0	15.0	60.0	6000	0.8	FGC3WKJ10E142EL5
1600	650	0.012	18.0	12.0	6.0	15.0	72.0	6000	0.8	FGC3WKJ12E172EL5
1600	650	0.015	18.0	12.0	6.0	15.0	90.0	6000	0.8	FGC3WKJ15E172EL5
1600	650	0.018	18.0	13.5	7.5	15.0	108.0	6000	0.8	FGC3WKJ18E292EL5
1600	650	0.022	18.0	13.5	7.5	15.0	132.0	6000	0.8	FGC3WK223E292EL5
1600	650	0.027	18.0	14.5	8.5	15.0	162.0	6000	0.8	FGC3WK273E342EL5
1600	650	0.033	18.0	14.5	8.5	15.0	198.0	6000	0.8	FGC3WK333E342EL5
1600	650	0.039	26.0	16.5	7.0	22.5	117.0	3000	0.8	FGC3WK393F172FL5
1600	650	0.047	26.0	16.5	7.0	22.5	141.0	3000	0.8	FGC3WK473F172FL5
1600	650	0.056	26.0	17.0	8.5	22.5	168.0	3000	0.8	FGC3WK563F202FL5
1600	650	0.068	26.0	19.0	10.0	22.5	204.0	3000	0.8	FGC3WK683F242FL5
1600	650	0.082	26.0	19.0	10.0	22.5	246.0	3000	0.8	FGC3WK823F242FL5
1600	650	0.10	26.0	20.0	11.0	22.5	300.0	3000	0.8	FGC3WKJ10F262FL5
1600	650	0.12	32.0	22.0	13.0	27.5	240.0	2000	0.8	FGC3WK124G212GL5
1600	650	0.15	32.0	24.5	13.0	27.5	300.0	2000	0.8	FGC3WK154G222GL5
1600	650	0.18	32.0	28.0	14.0	27.5	360.0	2000	0.8	FGC3WKJ18G262GL5
1600	650	0.22	32.0	33.0	18.0	27.5	440.0	2000	0.8	FGC3WKJ22G342GL5
1600	650	0.27	32.0	33.0	18.0	27.5	540.0	2000	0.8	FGC3WKJ27G342GL5
1600	650	0.33	32.0	33.0	18.0	27.5	660.0	2000	0.8	FGC3WK334G342GL5
1600	650	0.39	32.0	37.0	22.0	27.5	780.0	2000	0.8	FGC3WKJ39G402GL5
1600	650	0.47	32.0	37.0	22.0	27.5	940.0	2000	0.8	FGC3WKJ47G402GL5
1600	650	0.47	42.5	32.0	19.0	37.5	564.0	1200	1.0	FGC3WK474K212KL5
1600	650	0.56	42.5	40.0	20.0	37.5	672.0	1200	1.0	FGC3WKJ56K242KL5
1600	650	0.68	42.5	40.0	20.0	37.5	816.0	1200	1.0	FGC3WK684K242KL5
1600	650	0.82	42.5	44.0	24.0	37.5	984.0	1200	1.0	FGC3WK824K322KL5
1600	650	1.0	42.5	44.0	24.0	37.5	1200.0	1200	1.0	FGC3WK105K322KL5
1600	650	1.2	42.5	45.0	30.0	37.5	1440.0	1200	1.0	FGC3WK125K422KL5
2000	700	0.0010	18.0	11.0	5.0	15.0	9.5	9500	0.8	FGC3DK102E142EL5
2000	700	0.0012	18.0	11.0	5.0	15.0	11.4	9500	0.8	FGC3DK122E142EL5
2000	700	0.0015	18.0	11.0	5.0	15.0	14.3	9500	0.8	FGC3DK152E142EL5
2000	700	0.0018	18.0	11.0	5.0	15.0	17.1	9500	0.8	FGC3DK182E142EL5
2000	700	0.0022	18.0	11.0	5.0	15.0	20.9	9500	0.8	FGC3DK222E142EL5
2000	700	0.0027	18.0	11.0	5.0	15.0	25.7	9500	0.8	FGC3DK272E142EL5
2000	700	0.0033	18.0	11.0	5.0	15.0	31.4	9500	0.8	FGC3DK332E142EL5
2000	700	0.0039	18.0	11.0	5.0	15.0	37.1	9500	0.8	FGC3DK392E142EL5
2000	700	0.0047	18.0	11.0	5.0	15.0	44.7	9500	0.8	FGC3DK472E142EL5
2000	700	0.0056	18.0	12.0	6.0	15.0	53.2	9500	0.8	FGC3DK562E172EL5
2000	700	0.0068	18.0	12.0	6.0	15.0	64.6	9500	0.8	FGC3DK682E172EL5
2000	700	0.0082	18.0	12.0	6.0	15.0	77.9	9500	0.8	FGC3DK822E172EL5
2000	700	0.010	18.0	13.5	7.5	15.0	95.0	9500	0.8	FGC3DK103E292EL5
2000	700	0.012	18.0	14.5	8.5	15.0	114.0	9500	0.8	FGC3DK123E342EL5
2000	700	0.015	18.0	14.5	8.5	15.0	142.5	9500	0.8	FGC3DK153E342EL5

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## Double Metallized Polypropylene Film Capacitor (Plastic Case) DC/Pulse/High Frequency Applications

### FGC Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
2000	700	0.018	18.0	16.0	10.0	15.0	171.0	9500	0.8	FGC3DK183E432EL5
2000	700	0.022	26.0	16.5	7.0	22.5	77.0	3500	0.8	FGC3DK223F172FL5
2000	700	0.027	26.0	16.5	7.0	22.5	94.5	3500	0.8	FGC3DK273F172FL5
2000	700	0.033	26.0	17.0	8.5	22.5	115.5	3500	0.8	FGC3DK333F202FL5
2000	700	0.039	26.0	19.0	10.0	22.5	136.5	3500	0.8	FGC3DK393F242FL5
2000	700	0.047	26.0	19.0	10.0	22.5	164.5	3500	0.8	FGC3DK473F242FL5
2000	700	0.056	26.0	20.0	11.0	22.5	196.0	3500	0.8	FGC3DK563F262FL5
2000	700	0.068	32.0	22.0	13.0	27.5	170.0	2500	0.8	FGC3DK683G212GL5
2000	700	0.082	32.0	24.5	13.0	27.5	205.0	2500	0.8	FGC3DK822G222GL5
2000	700	0.10	32.0	28.0	14.0	27.5	250.0	2500	0.8	FGC3DK104G262GL5
2000	700	0.12	32.0	33.0	18.0	27.5	300.0	2500	0.8	FGC3DK124G342GL5
2000	700	0.15	32.0	33.0	18.0	27.5	375.0	2500	0.8	FGC3DK154G342GL5
2000	700	0.18	32.0	37.0	22.0	27.5	450.0	2500	0.8	FGC3DK184G402GL5
2000	700	0.22	32.0	37.0	22.0	27.5	550.0	2500	0.8	FGC3DK224G402GL5
2000	700	0.22	42.5	32.0	19.0	37.5	330.0	1500	1.0	FGC3DK224K212KL5
2000	700	0.27	42.5	40.0	20.0	37.5	405.0	1500	1.0	FGC3DK274K242KL5
2000	700	0.33	42.5	40.0	20.0	37.5	495.0	1500	1.0	FGC3DK334K242KL5
2000	700	0.39	42.5	44.0	24.0	37.5	585.0	1500	1.0	FGC3DK394K322KL5
2000	700	0.47	42.5	44.0	24.0	37.5	705.0	1500	1.0	FGC3DK474K322KL5
2000	700	0.56	42.5	45.0	30.0	37.5	840.0	1500	1.0	FGC3DK564K422KL5
2000	700	0.68	42.5	45.0	30.0	37.5	1020.0	1500	1.0	FGC3DK684K422KL5

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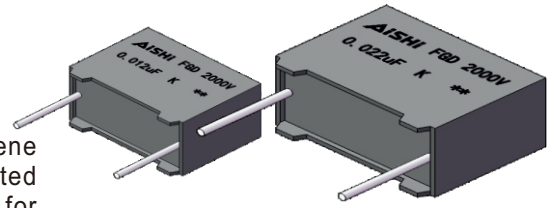
\* Specification are subject to change, please refer to approved data sheets.

# High Voltage Metallized Polypropylene Film /Foil Capacitor (Plastic Case) Pulse/High Frequency Applications

## FGD Series

### Overview

The FGD series is non-inductively wound with metallized polypropylene film in series with aluminum foil, polypropylene film, and encapsulated in plastic case and sealed with epoxy resin. They are suitable for applications require rectangular shape.



### Applications

- Monitors (S-correction and flyback tuning)
- Ballasts and compact lamps
- Snubber and silicon-controlled rectifier
- High frequency, DC and pulse circuits

### Features

- High ripple current
- Self-healing property
- Low losses
- High dv/dt
- High contact reliability
- Suitable for high frequency applications

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-17
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +105°C
Rated Voltage	1000Vdc ~ 2000Vdc
Capacitance Range	0.00015μF ~ 0.082μF
Capacitance Tolerance	±3%, ±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±2% DF change (Δtgδ):≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±2% DF change (Δtgδ):≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit



# High Voltage Metallized Polypropylene Film /Foil Capacitor (Plastic Case) Pulse/High Frequency Applications

## FGD Series

### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
1000	400	0.0033	18.0	11.0	5.0	15.0	92.4	28000	0.6	FGD3KK332E142EL5
1000	400	0.0039	18.0	11.0	5.0	15.0	109.2	28000	0.6	FGD3KK392E142EL5
1000	400	0.0047	18.0	11.0	5.0	15.0	131.6	28000	0.6	FGD3KK472E142EL5
1000	400	0.0056	18.0	11.0	5.0	15.0	156.8	28000	0.6	FGD3KK562E142EL5
1000	400	0.0068	18.0	11.0	5.0	15.0	190.4	28000	0.6	FGD3KK682E142EL5
1000	400	0.0082	18.0	11.0	5.0	15.0	229.6	28000	0.6	FGD3KK822E142EL5
1000	400	0.010	18.0	12.0	6.0	15.0	280.0	28000	0.6	FGD3KK103E172EL5
1000	400	0.012	18.0	12.0	6.0	15.0	336.0	28000	0.6	FGD3KK123E172EL5
1000	400	0.015	18.0	13.5	7.5	15.0	420.0	28000	0.8	FGD3KK153E292EL5
1000	400	0.018	18.0	14.5	8.5	15.0	504.0	28000	0.8	FGD3KK183E342EL5
1000	400	0.022	18.0	14.5	8.5	15.0	616.0	28000	0.8	FGD3KK223E342EL5
1000	400	0.027	18.0	16.0	10.0	15.0	756.0	28000	0.8	FGD3KK273E432EL5
1000	400	0.033	26.0	16.5	7.0	22.5	363.0	11000	0.8	FGD3KK333F172FL5
1000	400	0.039	26.0	17.0	8.5	22.5	429.0	11000	0.8	FGD3KK393F202FL5
1000	400	0.047	26.0	19.0	10.0	22.5	517.0	11000	0.8	FGD3KK473F242FL5
1000	400	0.056	26.0	19.0	10.0	22.5	616.0	11000	0.8	FGD3KK563F242FL5
1000	400	0.068	26.0	20.0	11.0	22.5	748.0	11000	0.8	FGD3KK683F262FL5
1250	450	0.0022	18.0	11.0	5.0	15.0	66.0	30000	0.6	FGD3RK222E142EL5
1250	450	0.0027	18.0	11.0	5.0	15.0	81.0	30000	0.6	FGD3RK272E142EL5
1250	450	0.0032	18.0	12.0	6.0	15.0	96.0	30000	0.6	FGD3RK332E172EL5
1250	450	0.0039	18.0	12.0	6.0	15.0	117.0	30000	0.6	FGD3RK392E172EL5
1250	450	0.0047	18.0	13.5	7.5	15.0	141.0	30000	0.8	FGD3RK472E292EL5
1250	450	0.0056	18.0	13.5	7.5	15.0	168.0	30000	0.8	FGD3RK562E292EL5
1250	450	0.0068	18.0	14.5	8.5	15.0	204.0	30000	0.8	FGD3RK682E342EL5
1250	450	0.0082	18.0	16.0	10.0	15.0	246.0	30000	0.8	FGD3RK822E432EL5
1250	450	0.010	26.0	16.5	7.0	22.5	110.0	11000	0.8	FGD3RK103F172FL5
1250	450	0.012	26.0	16.5	7.0	22.5	132.0	11000	0.8	FGD3RK123F172FL5
1250	450	0.015	26.0	16.5	7.0	22.5	165.0	11000	0.8	FGD3RK153F172FL5
1250	450	0.018	26.0	16.5	7.0	22.5	198.0	11000	0.8	FGD3RK183F172FL5
1250	450	0.022	26.0	17.0	8.5	22.5	242.0	11000	0.8	FGD3RK223F202FL5
1250	450	0.027	26.0	19.0	10.0	22.5	297.0	11000	0.8	FGD3RK273F242FL5
1250	450	0.033	26.0	19.0	10.0	22.5	363.0	11000	0.8	FGD3RK333F242FL5
1250	450	0.039	32.0	18.0	9.0	27.5	429.0	11000	0.8	FGD3RK393G152GL5
1250	450	0.047	32.0	20.0	11.0	27.5	517.0	11000	0.8	FGD3RK473G182GL5
1250	450	0.056	32.0	20.0	11.0	27.5	616.0	11000	0.8	FGD3RK563G182GL5
1250	450	0.068	32.0	22.0	13.0	27.5	748.0	11000	0.8	FGD3RK683G212GL5
1250	450	0.082	32.0	24.5	13.0	27.5	902.0	11000	0.8	FGD3RK823G222GL5
1600	500	0.0010	18.0	11.0	5.0	15.0	34.0	34000	0.6	FGD3WKJ10E142EL5
1600	500	0.0012	18.0	11.0	5.0	15.0	40.8	34000	0.6	FGD3WKJ12E142EL5
1600	500	0.0015	18.0	11.0	5.0	15.0	51.0	34000	0.6	FGD3WKJ15E142EL5
1600	500	0.0018	18.0	11.0	5.0	15.0	61.2	34000	0.6	FGD3WKJ18E142EL5
1600	500	0.0022	18.0	12.0	6.0	15.0	74.8	34000	0.6	FGD3WKJ22E172EL5
1600	500	0.0027	18.0	12.0	6.0	15.0	91.8	34000	0.6	FGD3WK272E172EL5
1600	500	0.0033	18.0	13.5	7.5	15.0	112.2	34000	0.8	FGD3WKJ33E292EL5
1600	500	0.0039	18.0	13.5	7.5	15.0	132.6	34000	0.8	FGD3WKJ39E292EL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# High Voltage Metallized Polypropylene Film /Foil Capacitor (Plastic Case) Pulse/High Frequency Applications

## FGD Series

### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
1600	500	0.0047	18.0	14.5	8.5	15.0	159.8	34000	0.8	FGD3WK472E342EL5
1600	500	0.0056	18.0	16.0	10.0	15.0	190.4	34000	0.8	FGD3WKJ56E432EL5
1600	500	0.0068	18.0	16.0	10.0	15.0	231.2	34000	0.8	FGD3WKJ68E432EL5
1600	500	0.0082	26.0	16.5	7.0	22.5	90.2	11000	0.8	FGD3WK822F172FL5
1600	500	0.010	26.0	16.5	7.0	22.5	110.0	11000	0.8	FGD3WKJ10F172FL5
1600	500	0.012	26.0	16.5	7.0	22.5	132.0	11000	0.8	FGD3WKJ12F172FL5
1600	500	0.015	26.0	17.0	8.5	22.5	165.0	11000	0.8	FGD3WKJ15F202FL5
1600	500	0.018	26.0	17.0	8.5	22.5	198.0	11000	0.8	FGD3WKJ18F202FL5
1600	500	0.022	26.0	19.0	10.0	22.5	242.0	11000	0.8	FGD3WK223F242FL5
1600	500	0.027	32.0	18.0	9.0	27.5	297.0	11000	0.8	FGD3WKJ27G152GL5
1600	500	0.033	32.0	20.0	11.0	27.5	363.0	11000	0.8	FGD3WK333G182GL5
1600	500	0.039	32.0	20.0	11.0	27.5	429.0	11000	0.8	FGD3WKJ39G182GL5
1600	500	0.047	32.0	22.0	13.0	27.5	517.0	11000	0.8	FGD3WK473G212GL5
1600	500	0.056	32.0	22.0	13.0	27.5	616.0	11000	0.8	FGD3WK563G212GL5
2000	550	0.00015	18.0	11.0	5.0	15.0	8.1	54000	0.6	FGD3DK151E142EL5
2000	550	0.00022	18.0	11.0	5.0	15.0	11.9	54000	0.6	FGD3DK221E142EL5
2000	550	0.00033	18.0	11.0	5.0	15.0	17.8	54000	0.6	FGD3DK331E142EL5
2000	550	0.00047	18.0	11.0	5.0	15.0	25.4	54000	0.6	FGD3DK471E142EL5
2000	550	0.00068	18.0	11.0	5.0	15.0	36.7	54000	0.6	FGD3DK681E142EL5
2000	550	0.0010	18.0	12.0	6.0	15.0	54.0	54000	0.6	FGD3DK102E172EL5
2000	550	0.0012	18.0	12.0	6.0	15.0	64.8	54000	0.6	FGD3DK122E172EL5
2000	550	0.0015	18.0	13.5	7.5	15.0	81.0	54000	0.8	FGD3DK152E292EL5
2000	550	0.0018	18.0	13.5	7.5	15.0	97.2	54000	0.8	FGD3DK182E292EL5
2000	550	0.0022	18.0	14.5	8.5	15.0	118.8	54000	0.8	FGD3DK222E342EL5
2000	550	0.0027	18.0	16.0	10.0	15.0	145.8	54000	0.8	FGD3DK272E432EL5
2000	550	0.0033	26.0	16.5	7.0	22.5	36.3	11000	0.8	FGD3DK332F172FL5
2000	550	0.0039	26.0	16.5	7.0	22.5	42.9	11000	0.8	FGD3DK392F172FL5
2000	550	0.0047	26.0	16.5	7.0	22.5	51.7	11000	0.8	FGD3DK472F172FL5
2000	550	0.0056	26.0	16.5	7.0	22.5	61.6	11000	0.8	FGD3DK562F172FL5
2000	550	0.0068	26.0	17.0	8.5	22.5	74.8	11000	0.8	FGD3DK682F202FL5
2000	550	0.0082	26.0	17.0	8.5	22.5	90.2	11000	0.8	FGD3DK822F202FL5
2000	550	0.010	26.0	19.0	10.0	22.5	110.0	11000	0.8	FGD3DK103F242FL5
2000	550	0.012	26.0	20.0	11.0	22.5	132.0	11000	0.8	FGD3DK123F262FL5
2000	550	0.015	32.0	20.0	11.0	27.5	165.0	11000	0.8	FGD3DK153G182GL5
2000	550	0.018	32.0	22.0	13.0	27.5	198.0	11000	0.8	FGD3DK183G212GL5
2000	550	0.022	32.0	22.0	13.0	27.5	242.0	11000	0.8	FGD3DK223G212GL5

\* Customized products are available by request, contact us for more details.

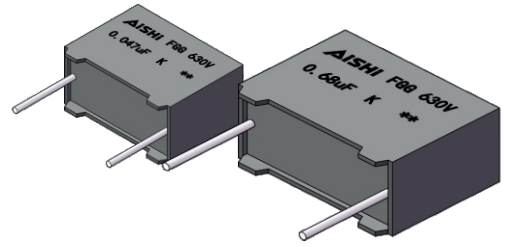
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polyester Film Capacitor (Plastic Case) DC and Pulse Applications

## FGG Series

### Overview

The FGG series is constructed of single metallized polyester film encapsulated in plastic case and sealed with epoxy resin.



### Applications

- By-passing, blocking, coupling, decoupling
- Pulse, logic, timing, oscillator circuits
- Compact lamps
- Electronic ballasts

### Features

- High ripple current
- Self-healing property
- High density packaging
- Good solderability
- High moisture resistance

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-2
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +105°C
Rated Voltage	100Vdc ~ 630Vdc
Capacitance Range	0.001µF ~ 33.0µF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.01 (1.0%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0kVac 50 Hz for 10s at +25°C
Insulation Resistance	> 30,000 MΩ (C ≤ 0.33µF) at 100VDC 1 minute at +25°C > 10,000 MΩ (C > 0.33µF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T = +85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad steel wires
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH): 93% ±2%
	Test duration : 56 days
	Capacitance change : ≤ ±5% DF change ( $\Delta \text{tg } \delta$ ): ≤ 10 X 10 <sup>-3</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied: 1.25 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤ ±5% DF change ( $\Delta \text{tg } \delta$ ): ≤ 10 X 10 <sup>-3</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit

# Metallized Polyester Film Capacitor (Plastic Case) DC and Pulse Applications

## FGG Series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
100	50	0.10	10.0	9.0	4.0	7.5	3.5	35	0.5	FGG1KK104B112BL5
100	50	0.10	13.0	9.0	4.0	10.0	3.0	30	0.6	FGG1KK104C112CL5
100	50	0.12	10.0	9.0	4.0	7.5	4.2	35	0.5	FGG1KK124B112BL5
100	50	0.12	13.0	9.0	4.0	10.0	3.6	30	0.6	FGG1KK124C112CL5
100	50	0.15	10.0	9.0	4.0	7.5	5.3	35	0.5	FGG1KK154B112BL5
100	50	0.15	13.0	9.0	4.0	10.0	4.5	30	0.6	FGG1KK154C112CL5
100	50	0.18	10.0	9.0	4.0	7.5	6.3	35	0.5	FGG1KK184B112BL5
100	50	0.18	13.0	9.0	4.0	10.0	5.4	30	0.6	FGG1KK184C112CL5
100	50	0.22	10.0	9.0	4.0	7.5	7.7	35	0.5	FGG1KK224B112BL5
100	50	0.22	13.0	9.0	4.0	10.0	6.6	30	0.6	FGG1KK224C112CL5
100	50	0.33	10.0	9.0	4.0	7.5	11.6	35	0.5	FGG1KK334B112BL5
100	50	0.33	13.0	9.0	4.0	10.0	9.9	30	0.6	FGG1KK334C112CL5
100	50	0.47	10.0	9.0	4.0	7.5	16.5	35	0.5	FGG1KK474B112BL5
100	50	0.47	13.0	9.0	4.0	10.0	14.1	30	0.6	FGG1KK474C112CL5
100	50	0.56	10.0	11.0	5.0	7.5	19.6	35	0.5	FGG1KK564B152BL5
100	50	0.56	13.0	9.0	4.0	10.0	16.8	30	0.6	FGG1KK564C112CL5
100	50	0.68	10.0	11.0	5.0	7.5	23.8	35	0.5	FGG1KK684B152BL5
100	50	0.68	13.0	9.0	4.0	10.0	20.4	30	0.6	FGG1KK684C112CL5
100	50	0.82	10.0	12.0	6.0	7.5	28.7	35	0.5	FGG1KK824B162BL5
100	50	0.82	13.0	11.0	5.0	10.0	24.6	30	0.6	FGG1KK824C132CL5
100	50	1.0	10.0	12.0	6.0	7.5	35.0	35	0.5	FGG1KK105B162BL5
100	50	1.0	13.0	11.0	5.0	10.0	30.0	30	0.6	FGG1KK105C132CL5
100	50	1.2	13.0	12.0	6.0	10.0	36.0	30	0.6	FGG1KK125C162CL5
100	50	1.5	13.0	12.0	6.0	10.0	45.0	30	0.6	FGG1KK155C162CL5
100	50	1.8	13.0	13.0	7.0	10.0	54.0	30	0.6	FGG1KK185C242CL5
100	50	2.2	18.0	12.0	6.0	15.0	44.0	20	0.6	FGG1KK225E172EL5
100	50	3.3	18.0	13.5	7.5	15.0	66.0	20	0.8	FGG1KK335E292EL5
100	50	4.7	18.0	14.5	8.5	15.0	94.0	20	0.8	FGG1KK475E342EL5
100	50	4.7	26.0	16.5	7.0	22.5	47.0	10	0.8	FGG1KK475F172FL5
100	50	6.8	26.0	19.0	10.0	22.5	68.0	10	0.8	FGG1KK685F242FL5
100	50	8.2	26.0	20.0	11.0	22.5	82.0	10	0.8	FGG1KK825F262FL5
100	50	10	26.0	22.0	12.0	22.5	100.0	10	0.8	FGG1KK106F272FL5
100	50	10	32.0	20.0	11.0	27.5	50.0	5	0.8	FGG1KK106G182GL5
100	50	12	32.0	20.0	11.0	27.5	60.0	5	0.8	FGG1KK126G182GL5
100	50	15	32.0	22.0	13.0	27.5	75.0	5	0.8	FGG1KK156G212GL5
100	50	22	32.0	25.0	16.0	27.5	110.0	5	0.8	FGG1KK226G302GL5
100	50	30	32.0	28.0	18.0	27.5	150.0	5	0.8	FGG1KK306G332GL5
250	160	0.033	10.0	9.0	4.0	7.5	3.6	110	0.5	FGG2EK333B112BL5
250	160	0.033	13.0	9.0	4.0	10.0	2.6	80	0.6	FGG2EK333C112CL5
250	160	0.047	10.0	9.0	4.0	7.5	5.2	110	0.5	FGG2EK473B112BL5
250	160	0.047	13.0	9.0	4.0	10.0	3.8	80	0.6	FGG2EK473C112CL5
250	160	0.056	10.0	9.0	4.0	7.5	6.2	110	0.5	FGG2EK563B112BL5
250	160	0.056	13.0	9.0	4.0	10.0	4.5	80	0.6	FGG2EK563C112CL5
250	160	0.068	10.0	9.0	4.0	7.5	7.5	110	0.5	FGG2EK683B112BL5
250	160	0.068	13.0	9.0	4.0	10.0	5.4	80	0.6	FGG2EK683C112CL5

\* Customized products are available by request, contact us for more details.

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# Metallized Polyester Film Capacitor (Plastic Case)

## DC and Pulse Applications

### FGG Series

#### Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
250	160	0.082	10.0	9.0	4.0	7.5	9.0	110	0.5	FGG2EK823B112BL5
250	160	0.082	13.0	9.0	4.0	10.0	6.6	80	0.6	FGG2EK823C112CL5
250	160	0.10	10.0	9.0	4.0	7.5	11.0	110	0.5	FGG2EK104B112BL5
250	160	0.10	13.0	9.0	4.0	10.0	8.0	80	0.6	FGG2EK104C112CL5
250	160	0.12	10.0	9.0	4.0	7.5	13.2	110	0.5	FGG2EK124B112BL5
250	160	0.12	13.0	9.0	4.0	10.0	9.6	80	0.6	FGG2EK124C112CL5
250	160	0.15	10.0	9.0	4.0	7.5	16.5	110	0.5	FGG2EK154B112BL5
250	160	0.15	13.0	9.0	4.0	10.0	12.0	80	0.6	FGG2EK154C112CL5
250	160	0.18	10.0	11.0	5.0	7.5	19.8	110	0.5	FGG2EK184B152BL5
250	160	0.18	13.0	11.0	5.0	10.0	14.4	80	0.6	FGG2EK184C132CL5
250	160	0.22	10.0	11.0	5.0	7.5	24.2	110	0.5	FGG2EK224B152BL5
250	160	0.22	13.0	11.0	5.0	10.0	17.6	80	0.6	FGG2EK224C132CL5
250	160	0.33	10.0	12.0	6.0	7.5	36.3	110	0.5	FGG2EK334B162BL5
250	160	0.33	13.0	11.0	5.0	10.0	26.4	80	0.6	FGG2EK334C132CL5
250	160	0.39	13.0	12.0	6.0	10.0	31.2	80	0.6	FGG2EK394C162CL5
250	160	0.47	13.0	12.0	6.0	10.0	37.6	80	0.6	FGG2EK474C162CL5
250	160	0.47	18.0	11.0	5.0	15.0	21.2	45	0.6	FGG2EK474E142EL5
250	160	0.68	18.0	12.0	6.0	15.0	30.6	45	0.6	FGG2EK684E172EL5
250	160	1.0	18.0	13.5	7.5	15.0	45.0	45	0.8	FGG2EK105E292EL5
250	160	1.2	18.0	13.5	7.5	15.0	54.0	45	0.8	FGG2EK125E292EL5
250	160	1.5	18.0	14.5	8.5	15.0	67.5	45	0.8	FGG2EK155E342EL5
250	160	1.5	26.0	16.5	7.0	22.5	30.0	20	0.8	FGG2EK155F172FL5
250	160	1.8	26.0	16.5	7.0	22.5	36.0	20	0.8	FGG2EK185F172FL5
250	160	2.2	26.0	17.0	8.5	22.5	44.0	20	0.8	FGG2EK225F202FL5
250	160	3.3	26.0	20.0	11.0	22.5	66.0	20	0.8	FGG2EK335F262FL5
250	160	3.3	32.0	18.0	9.0	27.5	49.5	15	0.8	FGG2EK335G152GL5
250	160	4.7	32.0	20.0	11.0	27.5	70.5	15	0.8	FGG2EK475G182GL5
250	160	6.8	32.0	22.0	13.0	27.5	102.0	15	0.8	FGG2EK685G212GL5
250	160	10	32.0	25.0	16.0	27.5	150.0	15	0.8	FGG2EK106G302GL5
400	220	0.010	10.0	9.0	4.0	7.5	1.8	180	0.5	FGG2GK103B112BL5
400	220	0.010	13.0	9.0	4.0	10.0	1.5	150	0.6	FGG2GK103C112CL5
400	220	0.015	10.0	9.0	4.0	7.5	2.7	180	0.5	FGG2GK153B112BL5
400	220	0.015	13.0	9.0	4.0	10.0	2.3	150	0.6	FGG2GK153C112CL5
400	220	0.022	10.0	9.0	4.0	7.5	4.0	180	0.5	FGG2GK223B112BL5
400	220	0.022	13.0	9.0	4.0	10.0	3.3	150	0.6	FGG2GK223C112CL5
400	220	0.033	10.0	9.0	4.0	7.5	5.9	180	0.5	FGG2GK333B112BL5
400	220	0.033	13.0	9.0	4.0	10.0	5.0	150	0.6	FGG2GK333C112CL5
400	220	0.047	10.0	9.0	4.0	7.5	8.5	180	0.5	FGG2GK473B112BL5
400	220	0.047	13.0	9.0	4.0	10.0	7.1	150	0.6	FGG2GK473C112CL5
400	220	0.056	10.0	11.0	5.0	7.5	10.1	180	0.5	FGG2GK563B152BL5
400	220	0.056	13.0	9.0	4.0	10.0	8.4	150	0.6	FGG2GK563C112CL5
400	220	0.068	10.0	11.0	5.0	7.5	12.2	180	0.5	FGG2GK683B152BL5
400	220	0.068	13.0	11.0	5.0	10.0	10.2	150	0.6	FGG2GK683C132CL5
400	220	0.082	10.0	12.0	6.0	7.5	14.8	180	0.5	FGG2GK823B162BL5
400	220	0.082	13.0	11.0	5.0	10.0	12.3	150	0.6	FGG2GK823C132CL5

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\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polyester Film Capacitor (Plastic Case)

## DC and Pulse Applications

### FGG Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
400	220	0.10	10.0	12.0	6.0	7.5	18.0	180	0.5	FGG2GK104B162BL5
400	220	0.10	13.0	11.0	5.0	10.0	15.0	150	0.6	FGG2GK104C132CL5
400	220	0.12	13.0	12.0	6.0	10.0	18.0	150	0.6	FGG2GK124C162CL5
400	220	0.15	13.0	12.0	6.0	10.0	22.5	150	0.6	FGG2GK154C162CL5
400	220	0.15	18.0	11.0	5.0	15.0	9.8	65	0.6	FGG2GK154E142EL5
400	220	0.18	18.0	12.0	6.0	15.0	11.7	65	0.6	FGG2GK184E172EL5
400	220	0.22	18.0	12.0	6.0	15.0	14.3	65	0.6	FGG2GK224E172EL5
400	220	0.33	18.0	13.5	7.5	15.0	21.5	65	0.8	FGG2GK334E292EL5
400	220	0.47	18.0	14.5	8.5	15.0	30.6	65	0.8	FGG2GK474E342EL5
400	220	0.56	18.0	16.0	10.0	15.0	36.4	65	0.8	FGG2GK564E432EL5
400	220	0.68	18.0	19.0	11.0	15.0	44.2	65	0.8	FGG2GK684E472EL5
400	220	0.68	26.0	16.5	7.0	22.5	20.4	30	0.8	FGG2GK684F172FL5
400	220	0.82	26.0	17.0	8.5	22.5	24.6	30	0.8	FGG2GK824F202FL5
400	220	1.0	26.0	19.0	10.0	22.5	30.0	30	0.8	FGG2GK105F242FL5
400	220	1.5	26.0	22.0	12.0	22.5	45.0	30	0.8	FGG2GK155F272FL5
400	220	1.5	32.0	20.0	11.0	27.5	37.5	25	0.8	FGG2GK155G182GL5
400	220	1.8	32.0	20.0	11.0	27.5	45.0	25	0.8	FGG2GK155G182GL5
400	220	2.2	32.0	22.0	13.0	27.5	55.0	25	0.8	FGG2GK225G212GL5
400	220	3.3	32.0	25.0	16.0	27.5	82.5	25	0.8	FGG2GK335G302GL5
400	220	4.7	32.0	28.0	16.0	27.5	117.5	25	0.8	FGG2GK475G312GL5
400	220	6.8	32.0	33.0	18.0	27.5	170.0	25	0.8	FGG2GK685G342GL5
630	250	0.0010	10.0	9.0	4.0	7.5	0.3	250	0.5	FGG2LK102B112BL5
630	250	0.0010	13.0	9.0	4.0	10.0	0.2	200	0.6	FGG2LK102C112CL5
630	250	0.0015	10.0	9.0	4.0	7.5	0.4	250	0.5	FGG2LK152B112BL5
630	250	0.0015	13.0	9.0	4.0	10.0	0.3	200	0.6	FGG2LK152C112CL5
630	250	0.0022	10.0	9.0	4.0	7.5	0.6	250	0.5	FGG2LK222B112BL5
630	250	0.0022	13.0	9.0	4.0	10.0	0.4	200	0.6	FGG2LK222C112CL5
630	250	0.0033	10.0	9.0	4.0	7.5	0.8	250	0.5	FGG2LK332B112BL5
630	250	0.0033	13.0	9.0	4.0	10.0	0.7	200	0.6	FGG2LK332C112CL5
630	250	0.0047	10.0	9.0	4.0	7.5	1.2	250	0.5	FGG2LK472B112BL5
630	250	0.0047	13.0	9.0	4.0	10.0	0.9	200	0.6	FGG2LK472C112CL5
630	250	0.0068	10.0	9.0	4.0	7.5	1.7	250	0.5	FGG2LK682B112BL5
630	250	0.0068	13.0	9.0	4.0	10.0	1.4	200	0.6	FGG2LK682C112CL5
630	250	0.0082	10.0	9.0	4.0	7.5	2.1	250	0.5	FGG2LK822B112BL5
630	250	0.0082	13.0	9.0	4.0	10.0	1.6	200	0.6	FGG2LK822C112CL5
630	250	0.010	10.0	9.0	4.0	7.5	2.5	250	0.5	FGG2LK103B112BL5
630	250	0.010	13.0	9.0	4.0	10.0	2.0	200	0.6	FGG2LK103C112CL5
630	250	0.015	10.0	9.0	4.0	7.5	3.8	250	0.5	FGG2LK153B112BL5
630	250	0.015	13.0	9.0	4.0	10.0	3.0	200	0.6	FGG2LK153C112CL5
630	250	0.022	10.0	11.0	5.0	7.5	5.5	250	0.5	FGG2LK223B152BL5
630	250	0.022	13.0	9.0	4.0	10.0	4.4	200	0.6	FGG2LK223C112CL5
630	250	0.033	10.0	12.0	6.0	7.5	8.3	250	0.5	FGG2LK333B162BL5
630	250	0.033	13.0	11.0	5.0	10.0	6.6	200	0.6	FGG2LK333C132CL5
630	250	0.039	10.0	12.0	6.0	7.5	9.8	250	0.5	FGG2LK393B162BL5
630	250	0.039	13.0	11.0	5.0	10.0	7.8	200	0.6	FGG2LK393C132CL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## Metallized Polyester Film Capacitor (Plastic Case) DC and Pulse Applications

### FGG Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
630	250	0.047	10.0	12.0	6.0	7.5	11.8	250	0.5	FGG2LK473B162BL5
630	250	0.047	13.0	11.0	5.0	10.0	9.4	200	0.6	FGG2LK473C132CL5
630	250	0.068	13.0	12.0	6.0	10.0	13.6	200	0.6	FGG2LK683C162CL5
630	250	0.082	18.0	11.0	5.0	15.0	7.4	90	0.6	FGG2LK823E142EL5
630	250	0.10	18.0	12.0	6.0	15.0	9.0	90	0.6	FGG2LK104E172EL5
630	250	0.15	18.0	13.5	7.5	15.0	13.5	90	0.8	FGG2LK154E292EL5
630	250	0.18	18.0	14.5	8.5	15.0	16.2	90	0.8	FGG2LK184E342EL5
630	250	0.22	18.0	16.0	10.0	15.0	19.8	90	0.8	FGG2LK224E432EL5
630	250	0.33	18.0	19.0	11.0	15.0	29.7	90	0.8	FGG2LK334E472EL5
630	250	0.47	26.0	17.0	8.5	22.5	16.5	35	0.8	FGG2LK474F202FL5
630	250	0.56	26.0	19.0	10.0	22.5	19.6	35	0.8	FGG2LK564F242FL5
630	250	0.68	26.0	22.0	12.0	22.5	23.8	35	0.8	FGG2LK684F272FL5
630	250	0.82	32.0	20.0	11.0	27.5	28.7	35	0.8	FGG2LK824G182FL5
630	250	1.0	32.0	22.0	13.0	27.5	35.0	35	0.8	FGG2LK105G212FL5

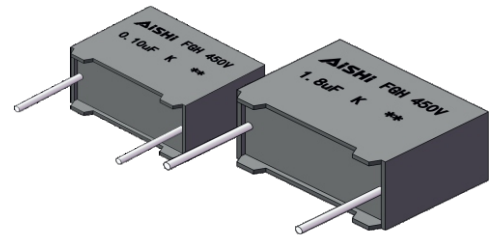
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# Metallized Polypropylene Film Capacitor (Box Type)

## PFC Applications (125°C)

### FGH Series



#### Overview

The FGH series is constructed of metallized polypropylene film encapsulated in plastic cases, sealed with epoxy resin. They are suitable for high current at high frequency and high stability are required.

#### Applications

- Power supplies
- Power factor correction
- Ballasts and compact lamps
- Inverter

#### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- PP dielectric up to 125°C

#### Specifications

Items	Characteristics
Reference Standard	IEC 60384-16
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +125°C
Rated Voltage	450Vdc
Capacitance Range	0.1μF ~ 3.3μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	> 30,000 MΩ (C ≤ 0.33μF) at 100VDC 1 minute at +25°C > 10,000 MΩ (C > 0.33μF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Leads	Tinned copper wires or Copper-clad steel wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtg δ) : ≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (d.c.)
	Temperature: +125°C ±2°C Voltage applied:1.00 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtg δ) : ≤10 X 10 <sup>-4</sup> at 1KHz Insulation resistance : ≥50% of initial limit



# Metallized Polypropylene Film Capacitor (Box Type)

## PFC Applications (125°C)

### FGH Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
450	220	0.10	13.0	11.0	5.0	10.0	20.0	200	0.6	FGH2WK104C132CL5
450	220	0.12	13.0	11.0	5.0	10.0	24.0	200	0.6	FGH2WK124C132CL5
450	220	0.15	13.0	11.0	5.0	10.0	30.0	200	0.6	FGH2WK154C132CL5
450	220	0.18	13.0	11.0	5.0	10.0	36.0	200	0.6	FGH2WK184C132CL5
450	220	0.20	13.0	11.0	5.0	10.0	40.0	200	0.6	FGH2WK204C132CL5
450	220	0.22	13.0	11.0	5.0	10.0	44.0	200	0.6	FGH2WK224C132CL5
450	220	0.27	13.0	11.0	5.0	10.0	54.0	200	0.6	FGH2WK274C132CL5
450	220	0.30	13.0	12.0	6.0	10.0	60.0	200	0.6	FGH2WK304C162CL5
450	220	0.33	13.0	12.0	6.0	10.0	66.0	200	0.6	FGH2WK334C162CL5
450	220	0.39	13.0	12.0	6.0	10.0	78.0	200	0.6	FGH2WK394C162CL5
450	220	0.39	13.0	13.0	7.0	10.0	78.0	200	0.6	FGH2WK394C242CL5
450	220	0.47	13.0	12.0	6.0	10.0	94.0	200	0.6	FGH2WK474C162CL5
450	220	0.47	13.0	13.0	7.0	10.0	94.0	200	0.6	FGH2WK474C242CL5
450	220	0.56	13.0	14.0	8.0	10.0	112.0	200	0.6	FGH2WK564C262CL5
450	220	0.68	13.0	16.0	8.0	10.0	136.0	200	0.6	FGH2WK684C272CL5
450	220	0.82	13.0	18.0	9.0	10.0	164.0	200	0.6	FGH2WK824C312CL5
450	220	1.0	13.0	18.0	9.0	10.0	200.0	200	0.6	FGH2WK105C312CL5
450	220	1.0	13.0	19.0	10.0	10.0	200.0	200	0.6	FGH2WK105C332CL5
450	220	0.10	18.0	11.0	5.0	15.0	12.0	120	0.6	FGH2WK104E142EL5
450	220	0.12	18.0	11.0	5.0	15.0	14.4	120	0.6	FGH2WK124E142EL5
450	220	0.15	18.0	11.0	5.0	15.0	18.0	120	0.6	FGH2WK154E142EL5
450	220	0.18	18.0	11.0	5.0	15.0	21.6	120	0.6	FGH2WK184E142EL5
450	220	0.20	18.0	11.0	5.0	15.0	24.0	120	0.6	FGH2WK204E142EL5
450	220	0.22	18.0	11.0	5.0	15.0	26.4	120	0.6	FGH2WK224E142EL5
450	220	0.33	18.0	11.0	5.0	15.0	39.6	120	0.6	FGH2WK334E142EL5
450	220	0.39	18.0	11.0	5.0	15.0	46.8	120	0.6	FGH2WK394E142EL5
450	220	0.47	18.0	12.0	6.0	15.0	56.4	120	0.6	FGH2WK474E172EL5
450	220	0.56	18.0	12.0	6.0	15.0	67.2	120	0.6	FGH2WK564E172EL5
450	220	0.68	18.0	12.0	6.0	15.0	81.6	120	0.6	FGH2WK684E172EL5
450	220	0.82	18.0	13.0	7.0	15.0	98.4	120	0.8	FGH2WK824E212EL5
450	220	1.0	18.0	13.0	7.0	15.0	120.0	120	0.8	FGH2WK105E212EL5
450	220	1.2	18.0	14.5	8.5	15.0	144.0	120	0.8	FGH2WK125E342EL5
450	220	1.5	18.0	16.0	8.0	15.0	180.0	120	0.8	FGH2WK155E332EL5
450	220	1.5	18.0	16.0	10.0	15.0	180.0	120	0.8	FGH2WK155E432EL5
450	220	1.8	18.0	18.0	9.0	15.0	216.0	120	0.8	FGH2WK185E392EL5
450	220	1.8	18.0	16.0	10.0	15.0	216.0	120	0.8	FGH2WK185E432EL5
450	220	2.0	18.0	18.0	9.0	15.0	240.0	120	0.8	FGH2WK205E392EL5
450	220	2.0	18.0	16.0	10.0	15.0	240.0	120	0.8	FGH2WK205E432EL5
450	220	2.2	18.0	18.0	10.0	15.0	264.0	120	0.8	FGH2WK225E452EL5
450	220	2.5	18.0	19.0	11.0	15.0	300.0	120	0.8	FGH2WK255E472EL5
450	220	3.3	18.0	22.0	12.5	15.0	396.0	120	0.8	FGH2WK335E522EL5
450	220	1.5	26.0	16.5	7.0	22.5	120.0	80	0.8	FGH2WK155F172FL5
450	220	1.8	26.0	16.5	7.0	22.5	144.0	80	0.8	FGH2WK185F172FL5
450	220	2.2	26.0	17.0	8.5	22.5	176.0	80	0.8	FGH2WK225F202FL5
450	220	2.5	26.0	17.0	8.5	22.5	200.0	80	0.8	FGH2WK255F202FL5
450	220	3.3	26.0	19.0	10.0	22.5	264.0	80	0.8	FGH2WK335F242FL5

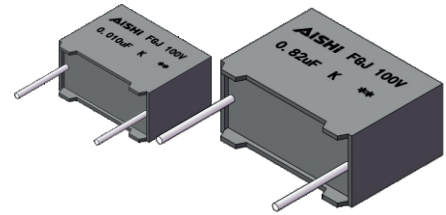
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\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polyester Film Capacitor (Box Type, P=5 mm )

## DC and Pulse Applications

### FGJ Series



#### Overview

The FGJ series is constructed of single metallized polyester film encapsulated in plastic case and sealed with epoxy resin.

#### Applications

- By-passing, blocking
- Coupling, decoupling
- Widely used in filter, low pulse circuits

#### Features

- Flame-retardant box, dimensional consistency
- Self-healing property
- High density packaging
- Good solderability
- High moisture resistance

#### Specifications

Items	Characteristics
Reference Standard	IEC 60384-2
Climatic Category	40/105/56 IEC 60068-1
Operating Temperature Range	-40°C to +105°C
Rated Voltage	63Vdc ~ 100Vdc
Capacitance Range	0.01µF ~ 1.0µF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.01 (1.0%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	> 30,000 MΩ (C ≤ 0.33µF) at 100VDC 1 minute at +25°C > 10,000 MΩ (C > 0.33µF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad steel wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH . RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2% Test duration : 56 days Capacitance change : ≤±5% DF change (Δtg δ) : ≤10 X 10 <sup>-3</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +105°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change : ≤±10% DF change (Δtg δ) : ≤10 X 10 <sup>-3</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polyester Film Capacitor (Box Type, P=5 mm )

## DC and Pulse Applications

### FGJ Series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
63	25	0.010	7.2	7.5	3.5	5.0	0.5	45	0.5	FGJ1JK103A11VAAT
63	25	0.012	7.2	7.5	3.5	5.0	0.5	45	0.5	FGJ1JK123A11VAAT
63	25	0.015	7.2	7.5	3.5	5.0	0.7	45	0.5	FGJ1JK153A11VAAT
63	25	0.018	7.2	7.5	3.5	5.0	0.8	45	0.5	FGJ1JK183A11VAAT
63	25	0.022	7.2	7.5	3.5	5.0	1.0	45	0.5	FGJ1JK223A11VAAT
63	25	0.027	7.2	7.5	3.5	5.0	1.2	45	0.5	FGJ1JK273A11VAAT
63	25	0.033	7.2	7.5	3.5	5.0	1.5	45	0.5	FGJ1JK333A11VAAT
63	25	0.047	7.2	7.5	3.5	5.0	2.1	45	0.5	FGJ1JK473A11VAAT
63	25	0.056	7.2	7.5	3.5	5.0	2.5	45	0.5	FGJ1JK563A11VAAT
63	25	0.068	7.2	7.5	3.5	5.0	3.1	45	0.5	FGJ1JK683A11VAAT
63	25	0.082	7.2	7.5	3.5	5.0	3.7	45	0.5	FGJ1JK823A11VAAT
63	25	0.10	7.2	7.5	3.5	5.0	4.5	45	0.5	FGJ1JK104A11VAAT
63	25	0.12	7.2	7.5	3.5	5.0	5.4	45	0.5	FGJ1JK124A11VAAT
63	25	0.15	7.2	7.5	3.5	5.0	6.8	45	0.5	FGJ1JK154A11VAAT
63	25	0.18	7.2	7.5	3.5	5.0	8.1	45	0.5	FGJ1JK184A11VAAT
63	25	0.22	7.2	7.5	3.5	5.0	9.9	45	0.5	FGJ1JK224A11VAAT
63	25	0.27	7.2	9.5	4.5	5.0	12.2	45	0.5	FGJ1JK274A12VAAT
63	25	0.33	7.2	9.5	4.5	5.0	14.9	45	0.5	FGJ1JK334A12VAAT
63	25	0.47	7.2	10.0	5.0	5.0	21.2	45	0.5	FGJ1JK474A13VAAT
63	25	0.56	7.2	10.0	5.0	5.0	25.2	45	0.5	FGJ1JK564A13VAAT
63	25	0.68	7.2	11.0	6.0	5.0	30.6	45	0.5	FGJ1JK684A14VAAT
63	25	0.82	7.2	11.0	6.0	5.0	36.9	45	0.5	FGJ1JK824A14VAAT
63	25	1.0	7.2	12.0	6.5	5.0	45.0	45	0.5	FGJ1JK105A16VAAT
100	25	0.010	7.2	7.5	3.5	5.0	0.5	45	0.5	FGJ1KK103A11VAAT
100	25	0.012	7.2	7.5	3.5	5.0	0.5	45	0.5	FGJ1KK123A11VAAT
100	25	0.015	7.2	7.5	3.5	5.0	0.7	45	0.5	FGJ1KK153A11VAAT
100	25	0.018	7.2	7.5	3.5	5.0	0.8	45	0.5	FGJ1KK183A11VAAT
100	25	0.022	7.2	7.5	3.5	5.0	1.0	45	0.5	FGJ1KK223A11VAAT
100	25	0.027	7.2	7.5	3.5	5.0	1.2	45	0.5	FGJ1KK273A11VAAT
100	25	0.033	7.2	7.5	3.5	5.0	1.5	45	0.5	FGJ1KK333A11VAAT
100	25	0.047	7.2	7.5	3.5	5.0	2.1	45	0.5	FGJ1KK473A11VAAT
100	25	0.056	7.2	7.5	3.5	5.0	2.5	45	0.5	FGJ1KK563A11VAAT
100	25	0.068	7.2	7.5	3.5	5.0	3.1	45	0.5	FGJ1KK683A11VAAT
100	25	0.082	7.2	7.5	3.5	5.0	3.7	45	0.5	FGJ1KK823A11VAAT
100	25	0.10	7.2	7.5	3.5	5.0	4.5	45	0.5	FGJ1KK104A11VAAT
100	25	0.12	7.2	7.5	3.5	5.0	5.4	45	0.5	FGJ1KK124A11VAAT
100	25	0.15	7.2	7.5	3.5	5.0	6.8	45	0.5	FGJ1KK154A11VAAT
100	25	0.18	7.2	7.5	3.5	5.0	8.1	45	0.5	FGJ1KK184A11VAAT
100	25	0.22	7.2	7.5	3.5	5.0	9.9	45	0.5	FGJ1KK224A11VAAT
100	25	0.27	7.2	9.5	4.5	5.0	12.2	45	0.5	FGJ1KK274A12VAAT
100	25	0.33	7.2	9.5	4.5	5.0	14.9	45	0.5	FGJ1KK334A12VAAT
100	25	0.47	7.2	10.0	5.0	5.0	21.2	45	0.5	FGJ1KK474A13VAAT
100	25	0.56	7.2	10.0	5.0	5.0	25.2	45	0.5	FGJ1KK564A13VAAT
100	25	0.68	7.2	11.0	6.0	5.0	30.6	45	0.5	FGJ1KK684A14VAAT
100	25	0.82	7.2	11.0	6.0	5.0	36.9	45	0.5	FGJ1KK824A14VAAT
100	25	1.0	7.2	12.0	6.5	5.0	45.0	45	0.5	FGJ1KK105A16VAAT

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Expected Lifetime Curves

## Performance Notes

Rs: Equivalent series resistance - Ohmic resistances (Ohm)

Dielectric Dissipation Factor:  $\tan\delta_0$  ( Polypropylene: 0.0002)

Ta: Ambient temperature

Rth: Thermal resistance °C / W, indicates hot spot temperature rise due to power dissipation losses

Pj: Joule losses  $P_j = R_s \cdot I_{rms}^2$

Pd: Dielectric losses

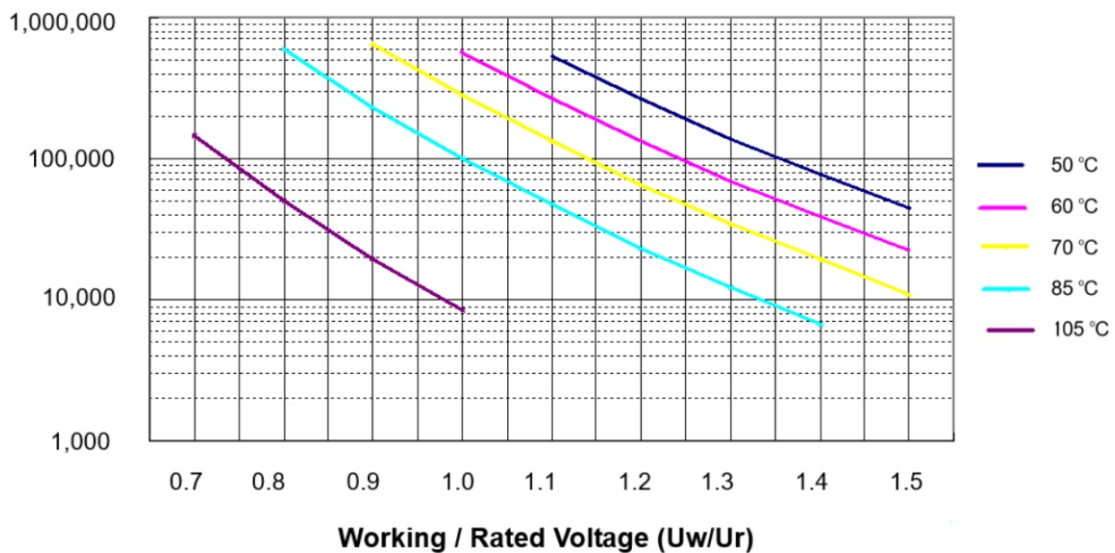
$$P_d = X_c \cdot I_{rms}^2 \cdot \tan\delta = I_{rms}^2 / (2 \cdot \pi \cdot f \cdot C) \cdot \tan\delta$$

T<sub>hs</sub>: Hot spot temperature within the capacitor

$$T_{hs} = T_a + (P_j + P_d) \cdot R_{th}$$

Design life: 100,000 hours at Un @ Hot-Spot temperature ≤ +85°C

## Expected Life Curve



## Cautions and Warnings

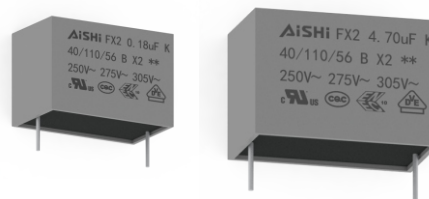
- Do not exceed the upper category temperature.
- For long time storage, maximum relative humidity 80%, no dew allowed on the capacitor.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments.
- Do not apply any mechanical stress to the capacitor terminals, and avoid any compressive, tensile or flexural stress.
- Do not move the capacitor after soldered to the PC board, and don't pick up the PC board by the soldered capacitor.
- Avoid overload of the capacitors.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) AC Applications

## FX2 series

### Overview

The FX2 series is constructed of metallized polypropylene film encapsulated with self-extinguishing resin in a box of material meeting the requirement of UL94V-0.



### Applications

- Applications which required X2 safety classification
- Across-the-line applications
- EMI filters
- Spark killer

### Features

- High temperature (110°C)
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-14, EN 60384-14, UL 60384-14
Climatic Category	40/110/56 IEC 60068-1
Passive Flammability Class	B
Operating Temperature Range	-40°C to +110°C
Capacitance Range	0.01μF to 45μF
Rated Voltage	250Vac ~ 305Vac
Capacitance Tolerance	±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1312VDC for 60s or 2000VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	2050Vac 50 Hz for 60s at +25°C
Insulation Resistance	>15,000 MΩ (C≤0.33uF) at 100VDC 1 minute at +25°C >5,000 MΩ (C>0.33uF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+ 85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad steel wires
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	C <sub>R</sub> ≤1 μF, Capacitance change : ≤±5%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz
	C <sub>R</sub> >1 μF, Capacitance change : ≤±5%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz
Endurance Test	Insulation resistance: ≥50% of initial limit
	Test conditions & performance:
	Temperature: +110°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.) +1000Vac/0.1s/h
	Test duration : 1000 hours
	C <sub>R</sub> ≤1 μF, Capacitance change : ≤±10%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz
C <sub>R</sub> >1 μF, Capacitance change : ≤±10%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz	
	Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) AC Applications

## FX2 series

### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
305	630	0.010	10.0	12.0	6.0	7.5	6.0	600	0.6	FX230K103B162BL5
305	630	0.022	10.0	12.0	6.0	7.5	13.2	600	0.6	FX230K223B162BL5
305	630	0.033	10.0	12.0	6.0	7.5	19.8	600	0.6	FX230K333B162BL5
305	630	0.047	10.0	12.0	6.0	7.5	28.2	600	0.6	FX230K473B162BL5
305	630	0.068	10.0	13.0	7.0	7.5	40.8	600	0.6	FX230K683B172BL5
305	630	0.100	10.0	14.0	8.0	7.5	60.0	600	0.6	FX230K104B182BL5
305	630	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FX230K103C132CL5
305	630	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FX230K223C132CL5
305	630	0.033	13.0	11.0	5.0	10.0	16.5	500	0.6	FX230K333C132CL5
305	630	0.047	13.0	11.0	5.0	10.0	23.5	500	0.6	FX230K473C132CL5
305	630	0.068	13.0	11.0	5.0	10.0	34.0	500	0.6	FX230K683C132CL5
305	630	0.082	13.0	11.0	5.0	10.0	41.0	500	0.6	FX230K823C132CL5
305	630	0.082	13.0	12.0	6.0	10.0	41.0	500	0.6	FX230K823C162CL5
305	630	0.10	13.0	12.0	6.0	10.0	50.0	500	0.6	FX230K104C162CL5
305	630	0.15	13.0	13.0	7.0	10.0	75.0	500	0.6	FX230K154C242CL5
305	630	0.15	13.0	14.0	8.0	10.0	75.0	500	0.6	FX230K154C262CL5
305	630	0.22	13.0	14.0	8.0	10.0	110.0	500	0.6	FX230K224C262CL5
305	630	0.27	13.0	16.0	8.0	10.0	135.0	500	0.6	FX230K274C272CL5
305	630	0.33	13.0	16.0	9.0	10.0	165.0	500	0.6	FX230K334C302CL5
305	630	0.15	15.0	12.5	7.0	12.5	75.0	500	0.6	FX230K154D132DL5
305	630	0.22	15.0	12.5	7.0	12.5	110.0	500	0.6	FX230K224D132DL5
305	630	0.33	15.0	14.0	8.5	12.5	165.0	500	0.6	FX230K334D162DL5
305	630	0.47	15.0	16.0	10.0	12.5	235.0	500	0.6	FX230K474D202DL5
305	630	0.047	18.0	11.0	5.0	15.0	18.8	400	0.6	FX230K473E142EL5
305	630	0.068	18.0	11.0	5.0	15.0	27.2	400	0.6	FX230K683E142EL5
305	630	0.082	18.0	11.0	5.0	15.0	32.8	400	0.6	FX230K823E142EL5
305	630	0.10	18.0	11.0	5.0	15.0	40.0	400	0.6	FX230K104E142EL5
305	630	0.10	18.0	12.0	6.0	15.0	40.0	400	0.6	FX230K104E172EL5
305	630	0.15	18.0	12.0	6.0	15.0	60.0	400	0.6	FX230K154E172EL5
305	630	0.22	18.0	12.0	6.0	15.0	88.0	400	0.6	FX230K224E172EL5
305	630	0.22	18.0	13.5	7.5	15.0	88.0	400	0.8	FX230K224E292EL5
305	630	0.27	18.0	13.5	7.5	15.0	108.0	400	0.8	FX230K27 E292EL5
305	630	0.27	18.0	14.5	8.5	15.0	108.0	400	0.8	FX230K274E342EL5
305	630	0.33	18.0	14.5	8.5	15.0	132.0	400	0.8	FX230K334E342EL5
305	630	0.33	18.0	16.0	10.0	15.0	132.0	400	0.8	FX230K334E432EL5
305	630	0.47	18.0	16.0	10.0	15.0	188.0	400	0.8	FX230K474E432EL5
305	630	0.47	18.0	19.0	11.0	15.0	188.0	400	0.8	FX230K474E472EL5
305	630	0.56	18.0	18.0	10.0	15.0	224.0	400	0.8	FX230K564E452EL5
305	630	0.68	18.0	19.0	11.0	15.0	272.0	400	0.8	FX230K684E472EL5
305	630	0.82	18.0	19.0	11.0	15.0	328.0	400	0.8	FX230K824E472EL5
305	630	1.0	18.0	22.0	12.5	15.0	400.0	400	0.8	FX230K105E522EL5
305	630	0.22	26.0	16.5	7.0	22.5	44.0	200	0.8	FX230K224F172FL5
305	630	0.27	26.0	16.5	7.0	22.5	54.0	200	0.8	FX230K274F172FL5
305	630	0.33	26.0	17.0	8.5	22.5	66.0	200	0.8	FX230K334F202FL5
305	630	0.47	26.0	17.0	8.5	22.5	94.0	200	0.8	FX230K474F202FL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) AC Applications

## FX2 series

### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
305	630	0.47	26.0	19.0	10.0	22.5	94.0	200	0.8	FX230K474F242FL5
305	630	0.56	26.0	17.0	8.5	22.5	112.0	200	0.8	FX230K564F202FL5
305	630	0.56	26.0	19.0	10.0	22.5	112.0	200	0.8	FX230K564F242FL5
305	630	0.68	26.0	17.0	8.5	22.5	136.0	200	0.8	FX230K684F202FL5
305	630	0.68	26.0	19.0	10.0	22.5	136.0	200	0.8	FX230K684F242FL5
305	630	0.82	26.0	19.0	10.0	22.5	164.0	200	0.8	FX230K824F242FL5
305	630	1.0	26.0	19.0	10.0	22.5	200.0	200	0.8	FX230K105F242FL5
305	630	1.0	26.0	20.0	11.0	22.5	200.0	200	0.8	FX230K105F262FL5
305	630	1.2	26.0	23.0	13.0	22.5	240.0	200	0.8	FX230K125F292FL5
305	630	1.5	26.0	23.0	13.0	22.5	300.0	200	0.8	FX230K155F292FL5
305	630	0.7	32.0	18.0	9.0	27.5	102.0	150	0.8	FX230K684G152GL5
305	630	0.8	32.0	18.0	9.0	27.5	123.0	150	0.8	FX230K824G152GL5
305	630	1.0	32.0	20.0	11.0	27.5	150.0	150	0.8	FX230K105G182GL5
305	630	1.2	32.0	22.0	13.0	27.5	180.0	150	0.8	FX230K125G212GL5
305	630	1.5	32.0	24.5	13.0	27.5	225.0	150	0.8	FX230K155G222GL5
305	630	2.2	32.0	28.0	14.0	27.5	330.0	150	0.8	FX230K225G262GL5
305	630	3.3	32.0	33.0	18.0	27.5	495.0	150	0.8	FX230K335G342GL5
305	630	4.7	32.0	33.0	18.0	27.5	705.0	150	0.8	FX230K475G342GL5
305	630	4.7	32.0	37.0	22.0	27.5	705.0	150	0.8	FX230K475G402GL5
305	630	4.7	42.5	32.0	19.0	37.5	470.0	100	1.0	FX230K475K212KL5
305	630	6.8	42.5	40.0	20.0	37.5	680.0	100	1.0	FX230K685K242KL5
305	630	6.8	42.5	44.0	24.0	37.5	680.0	100	1.0	FX230K685K322KL5
305	630	10	42.5	45.0	30.0	37.5	1000.0	100	1.0	FX230K106K422KL5
305	630	12	42.5	45.0	30.0	37.5	1200.0	100	1.0	FX230K126K422KL5
305	630	12	57.5	45.0	30.0	52.5	960.0	80	1.2	FX230K126M162ML5
305	630	15	42.5	45.0	30.0	37.5	1500.0	100	1.0	FX230K156K422KL5
305	630	15	57.5	45.0	30.0	52.5	1200.0	80	1.2	FX230K156M162ML5
305	630	18	42.5	45.0	30.0	37.5	1440.0	80	1.0	FX230K186K422KL5
305	630	18	57.5	45.0	30.0	52.5	1440.0	80	1.2	FX230K186M162ML5
305	630	20	42.5	45.0	30.0	37.5	1600.0	80	1.0	FX230K206K422KL5
305	630	20	57.5	45.0	30.0	52.5	1600.0	80	1.2	FX230K206M162ML5
305	630	22	42.5	45.0	30.0	37.5	1760.0	80	1.0	FX230K226K422KL5
305	630	22	57.5	45.0	30.0	52.5	1760.0	80	1.2	FX230K226M162ML5
305	630	25	57.5	45.0	30.0	52.5	2000.0	80	1.2	FX230K256M162ML5
305	630	30	57.5	45.0	30.0	52.5	2400.0	80	1.2	FX230K306M162ML5
305	630	30	57.5	50.0	35.0	52.5	2400.0	80	1.2	FX230K306M202ML5
305	630	33	57.5	50.0	35.0	52.5	2640.0	80	1.2	FX230K336M202ML5
305	630	39	57.5	50.0	35.0	52.5	3120.0	80	1.2	FX230K396M202ML5
305	630	40	57.5	50.0	35.0	52.5	3200.0	80	1.2	FX230K406M202ML5
305	630	45	57.5	60.0	45.0	52.5	3600.0	80	1.2	FX230K456M332ML5

\* Customized products are available by request, contact us for more details.

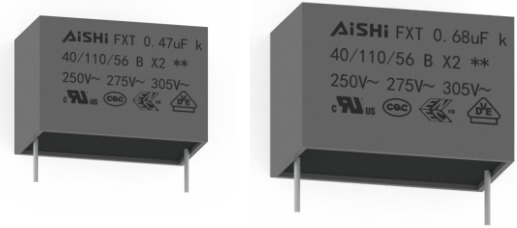
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) Temperature Humidity Bias (THB) AC Applications

## FXT series

### Overview

The FXT series is constructed of metallized polypropylene film encapsulated with self-extinguishing resin in a box of material meeting the requirement of UL94V-0.



### Applications

- Applications which required X2 safety classification
- Across-the-line applications
- EMI filters
- Spark killer

### Features

- High temperature (110°C)
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-14, EN 60384-14, UL 60384-14
Climatic Category	40/110/56 IEC 60068-1
Passive Flammability Class	B
Operating Temperature Range	-40°C to +110°C
Capacitance Range	0.01μF to 45.0μF
Rated Voltage	250Vac ~ 305Vac
Capacitance Tolerance	±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1312VDC for 60s or 2000VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	2050Vac 50 Hz for 60s at +25°C
Insulation Resistance	>15,000 MΩ (C≤0.33uF) at 100VDC 1 minute at +25°C >5,000 MΩ (C>0.33uF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad Steel Wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2% Test duration : 56 days C <sub>R</sub> ≤1 μF, Capacitance change : ≤±5%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz C <sub>R</sub> >1 μF, Capacitance change : ≤±5%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +110°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.) +1000Vac/0.1s/h Test duration : 1000 hours C <sub>R</sub> ≤1 μF, Capacitance change : ≤±10%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz C <sub>R</sub> >1 μF, Capacitance change : ≤±10%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C ±2°C Relative humidity(RH) :85% ±2% Loading Voltage: 240Vac (50Hz/60Hz) ; Test duration : 1000 hours Capacitance change : ≤±10%



# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) Temperature Humidity Bias (THB) AC Applications

## FXT series

### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
305	630	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FXT30K103C132CL5
305	630	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FXT30K223C132CL5
305	630	0.033	13.0	11.0	5.0	10.0	16.5	500	0.6	FXT30K333C132CL5
305	630	0.047	13.0	12.0	6.0	10.0	23.5	500	0.6	FXT30K473C162CL5
305	630	0.068	13.0	12.0	6.0	10.0	34.0	500	0.6	FXT30K683C162CL5
305	630	0.082	13.0	12.0	6.0	10.0	41.0	500	0.6	FXT30K823C162CL5
305	630	0.10	13.0	12.0	6.0	10.0	50.0	500	0.6	FXT30K104C162CL5
305	630	0.15	13.0	14.0	8.0	10.0	75.0	500	0.6	FXT30K154C262CL5
305	630	0.047	18.0	12.0	6.0	15.0	18.8	400	0.6	FXT30K473E172EL5
305	630	0.068	18.0	12.0	6.0	15.0	27.2	400	0.6	FXT30K683E172EL5
305	630	0.082	18.0	12.0	6.0	15.0	32.8	400	0.6	FXT30K823E172EL5
305	630	0.10	18.0	12.0	6.0	15.0	40.0	400	0.6	FXT30K104E172EL5
305	630	0.15	18.0	12.0	6.0	15.0	60.0	400	0.6	FXT30K154E172EL5
305	630	0.15	18.0	13.0	7.0	15.0	60.0	400	0.8	FXT30K154E212EL5
305	630	0.22	18.0	14.0	8.0	15.0	88.0	400	0.8	FXT30K224E312EL5
305	630	0.27	18.0	14.5	8.5	15.0	108.0	400	0.8	FXT30K274E342EL5
305	630	0.33	18.0	16.0	10.0	15.0	132.0	400	0.8	FXT30K334E432EL5
305	630	0.47	18.0	19.0	11.0	15.0	188.0	400	0.8	FXT30K474E472EL5
305	630	0.56	18.0	18.0	10.0	15.0	224.0	400	0.8	FXT30K564E452EL5
305	630	0.68	18.0	22.0	12.5	15.0	272.0	400	0.8	FXT30K684E522EL5
305	630	0.82	18.0	22.0	12.5	15.0	328.0	400	0.8	FXT30K824E522EL5
305	630	0.22	26.0	16.5	7.0	22.5	44.0	200	0.8	FXT30K224F172FL5
305	630	0.27	26.0	16.5	7.0	22.5	54.0	200	0.8	FXT30K274F172FL5
305	630	0.33	26.0	17.0	8.5	22.5	66.0	200	0.8	FXT30K334F202FL5
305	630	0.47	26.0	19.0	10.0	22.5	94.0	200	0.8	FXT30K474F242FL5
305	630	0.56	26.0	19.0	10.0	22.5	112.0	200	0.8	FXT30K564F242FL5
305	630	0.68	26.0	20.0	11.0	22.5	136.0	200	0.8	FXT30K684F262FL5
305	630	0.82	26.0	20.0	11.0	22.5	164.0	200	0.8	FXT30K824F262FL5
305	630	1.0	26.0	22.0	12.0	22.5	200.0	200	0.8	FXT30K105F272FL5
305	630	1.2	26.0	23.0	13.0	22.5	240.0	200	0.8	FXT30K125F292FL5
305	630	1.5	26.0	24.0	14.0	22.5	300.0	200	0.8	FXT30K155F322FL5
305	630	1.5	26.0	25.0	15.0	22.5	300.0	200	0.8	FXT30K155F362FL5
305	630	1.0	32.0	20.0	11.0	27.5	150.0	150	0.8	FXT30K105G182GL5
305	630	1.2	32.0	22.0	13.0	27.5	180.0	150	0.8	FXT30K125G212GL5
305	630	1.5	32.0	24.5	13.0	27.5	225.0	150	0.8	FXT30K155G222GL5
305	630	2.2	32.0	28.0	14.0	27.5	330.0	150	0.8	FXT30K225G262GL5
305	630	3.3	32.0	33.0	18.0	27.5	495.0	150	0.8	FXT30K335G342GL5
305	630	4.7	32.0	37.0	22.0	27.5	705.0	150	0.8	FXT30K475G402GL5
305	630	4.7	42.5	32.0	19.0	37.5	470.0	100	1.0	FXT30K475K212KL5
305	630	6.8	42.5	44.0	24.0	37.5	680.0	100	1.0	FXT30K685K322KL5
305	630	10	42.5	45.0	30.0	37.5	1000.0	100	1.0	FXT30K106K422KL5
305	630	12	42.5	45.0	30.0	37.5	1200.0	100	1.0	FXT30K126K422KL5
305	630	12	57.5	45.0	30.0	52.5	960.0	80	1.2	FXT30K126M162KL5
305	630	15	42.5	45.0	30.0	37.5	1500.0	100	1.0	FXT30K156K422KL5
305	630	15	57.5	45.0	30.0	52.5	1200.0	80	1.2	FXT30K156M162ML5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) Temperature Humidity Bias (THB) AC Applications

### FXT series

#### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
305	630	18	57.5	45.0	30.0	52.5	1440.0	80	1.2	FXT30K186M162ML5
305	630	20	57.5	45.0	30.0	52.5	1600.0	80	1.2	FXT30K206M162ML5
305	630	22	57.5	45.0	30.0	52.5	1760.0	80	1.2	FXT30K226M162ML5
305	630	25	57.5	45.0	30.0	52.5	2000.0	80	1.2	FXT30K256M162ML5
305	630	30	57.5	45.0	30.0	52.5	2400.0	80	1.2	FXT30K306M162ML5
305	630	30	57.5	50.0	35.0	52.5	2400.0	80	1.2	FXT30K306M202ML5
305	630	33	57.5	50.0	35.0	52.5	2640.0	80	1.2	FXT30K336M202ML5
305	630	39	57.5	50.0	35.0	52.5	3120.0	80	1.2	FXT30K396M202ML5
305	630	40	57.5	50.0	35.0	52.5	3200.0	80	1.2	FXT30K406M202ML5
305	630	45	57.5	60.0	45.0	52.5	3600.0	80	1.2	FXT30K456M332ML5

\* Customized products are available by request, contact us for more details.

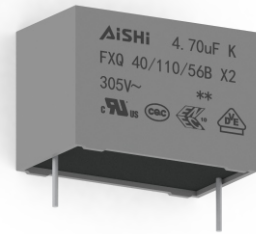
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) Automotive Grade Class X2 EMI Suppression Capacitor

## FXQ series

### Overview

The FXQ series is constructed of metallized polypropylene film encapsulated with self-extinguishing resin in a box of material meeting the requirement of UL94V-0. These FXQ series qualify in accordance to AEC-Q200 requirement.



### Applications

- Applications which required X2 safety classification
- Across-the-line applications
- EMI filters, spark killer
- Main-connected circuits

### Features

- Automotive Grade (AEC-Q200)
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- High temperature (110°C)
- Suitable for applications in harsh environment like high temperature and high humidity

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-14, EN 60384-14, UL 60384-14, AEC-Q200D
Climatic Category	40/110/56 IEC60068-1
Passive Flammability Class	B
Operating Temperature Range	-40°C to +110°C
Capacitance Range	0.01μF to 20.0μF
Rated Voltage	250Vac ~ 305Vac
Capacitance Tolerance	±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1312VDC for 60s or 2000VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	2050Vac 50 Hz for 60 sec at +25°C
Insulation Resistance	>15,000 MΩ (C≤0.33μF) at 100VDC 1 minute at +25°C >5,000 MΩ (C>0.33μF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad Steel Wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C±2°C Relative humidity (RH) :93% ±2% Test duration: 56 days Capacitance change: ≤5% DF change (Δtgδ): ≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +110°C±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.) Test duration: 1000 hours Capacitance change: ≤10% DF change (Δtgδ): ≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C±2°C Relative humidity (RH) :85% ±2% Loading Voltage: 240Vac (50Hz/60Hz); Test duration: 1000 hours Capacitance change: ≤10%

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X2) Automotive Grade Class X2 EMI Suppression Capacitor

## FXQ series

### Technical data

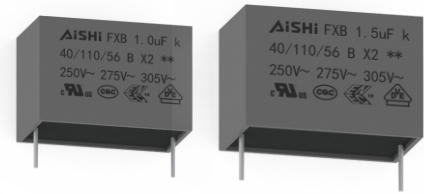
Vac	Vdc	Cap Value μF	Dimensions					Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			w mm	H mm	T mm	P mm	P1 mm				
305	630	0.010	13.0	11.0	5.0	10.0	\	5.0	500	0.6	FXQ30K103C132CL5
305	630	0.022	13.0	11.0	5.0	10.0	\	11.0	500	0.6	FXQ30K223C132CL5
305	630	0.033	13.0	11.0	5.0	10.0	\	16.5	500	0.6	FXQ30K333C132CL5
305	630	0.047	13.0	12.0	6.0	10.0	\	23.5	500	0.6	FXQ30K473C162CL5
305	630	0.068	13.0	12.0	6.0	10.0	\	34.0	500	0.6	FXQ30K683C162CL5
305	630	0.082	13.0	12.0	6.0	10.0	\	41.0	500	0.6	FXQ30K823C162CL5
305	630	0.10	13.0	12.0	6.0	10.0	\	50.0	500	0.6	FXQ30K104C162CL5
305	630	0.15	13.0	14.0	8.0	10.0	\	75.0	500	0.6	FXQ30K154C262CL5
305	630	0.047	18.0	12.0	6.0	15.0	\	18.8	400	0.6	FXQ30K473E172EL5
305	630	0.068	18.0	12.0	6.0	15.0	\	27.2	400	0.6	FXQ30K683E172EL5
305	630	0.10	18.0	12.0	6.0	15.0	\	40.0	400	0.6	FXQ30K104E172EL5
305	630	0.15	18.0	12.0	6.0	15.0	\	60.0	400	0.6	FXQ30K154E172EL5
305	630	0.15	18.0	13.0	7.0	15.0	\	60.0	400	0.6	FXQ30K154E212EL5
305	630	0.22	18.0	14.5	8.5	15.0	\	88.0	400	0.8	FXQ30K224E342EL5
305	630	0.27	18.0	14.5	8.5	15.0	\	108.0	400	0.8	FXQ30K274E342EL5
305	630	0.33	18.0	16.0	10.0	15.0	\	132.0	400	0.8	FXQ30K334E432EL5
305	630	0.47	18.0	19.0	11.0	15.0	\	188.0	400	0.8	FXQ30K474E472EL5
305	630	0.56	18.0	19.0	11.0	15.0	\	224.0	400	0.8	FXQ30K564E472EL5
305	630	0.68	18.0	22.0	12.5	15.0	\	272.0	400	0.8	FXQ30K684E522EL5
305	630	0.82	18.0	22.0	12.5	15.0	\	328.0	400	0.8	FXQ30K824E522EL5
305	630	0.22	26.0	16.5	7.0	22.5	\	44.0	200	0.8	FXQ30K224F172FL5
305	630	0.27	26.0	16.5	7.0	22.5	\	54.0	200	0.8	FXQ30K274F172FL5
305	630	0.33	26.0	17.0	8.5	22.5	\	66.0	200	0.8	FXQ30K334F202FL5
305	630	0.47	26.0	19.0	10.0	22.5	\	94.0	200	0.8	FXQ30K474F242FL5
305	630	0.56	26.0	19.0	10.0	22.5	\	112.0	200	0.8	FXQ30K564F242FL5
305	630	0.68	26.0	20.0	11.0	22.5	\	136.0	200	0.8	FXQ30K684F262FL5
305	630	0.82	26.0	20.0	11.0	22.5	\	164.0	200	0.8	FXQ30K824F262FL5
305	630	1.0	26.0	22.0	12.0	22.5	\	200.0	200	0.8	FXQ30K105F272FL5
305	630	1.2	26.0	23.0	13.0	22.5	\	240.0	200	0.8	FXQ30K125F292FL5
305	630	1.5	26.0	24.0	14.0	22.5	\	300.0	200	0.8	FXQ30K155F322FL5
305	630	1.5	26.0	25.0	15.0	22.5	\	300.0	200	0.8	FXQ30K155F362FL5
305	630	1.0	32.0	20.0	11.0	27.5	\	150.0	150	0.8	FXQ30K105G182GL5
305	630	1.2	32.0	22.0	13.0	27.5	\	180.0	150	0.8	FXQ30K125G212GL5
305	630	1.5	32.0	24.5	13.0	27.5	\	225.0	150	0.8	FXQ30K155G222GL5
305	630	2.2	32.0	28.0	14.0	27.5	\	330.0	150	0.8	FXQ30K225G262GL5
305	630	3.3	32.0	33.0	18.0	27.5	\	495.0	150	0.8	FXQ30K335G342GL5
305	630	4.7	32.0	37.0	22.0	27.5	10.2	705.0	150	0.8	FXQ30K475G404GB5
305	630	4.7	42.5	32.0	19.0	37.5	10.2	470.0	100	1.0	FXQ30K475K214KB5
305	630	6.8	42.5	44.0	24.0	37.5	10.2	680.0	100	1.0	FXQ30K685K324KB5
305	630	10	42.5	45.0	30.0	37.5	20.3	1000.0	100	1.0	FXQ30K106K424KD5
305	630	12	42.5	45.0	30.0	37.5	20.3	1200.0	100	1.0	FXQ30K126K424KD5
305	630	12	57.5	45.0	30.0	52.5	20.3	1200.0	100	1.2	FXQ30K126M164MD5
305	630	15	42.5	45.0	30.0	37.5	20.3	1500.0	100	1.0	FXQ30K156K424KD5
305	630	15	57.5	45.0	30.0	52.5	20.3	1500.0	100	1.2	FXQ30K156M164MD5
305	630	18	57.5	45.0	30.0	52.5	20.3	1800.0	100	1.2	FXQ30K186M164MD5
305	630	20	57.5	45.0	30.0	52.5	20.3	2000.0	100	1.2	FXQ30K206M164MD5

# Metallized Polypropylene Film AC Capacitor For Capacitive Divider (Class X2) Temperature Humidity Bias (THB) AC Applications

## FXB series

### Overview

The FXB series is constructed of metallized polypropylene film encapsulated with self-extinguishing resin in a box of material meeting the requirement of UL94V-0.



### Applications

- Connection in serial-with-the-main
- Capacitive divider
- Energy metering
- Industrial and automotive applications

### Features

- High temperature (110°C)
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-14, EN 60384-14, UL 60384-14
Climatic Category	40/110/56 IEC 60068-1
Passive Flammability Class	B
Operating Temperature Range	-40°C to +110°C
Capacitance Range	0.01μF to 2.2μF
Rated Voltage	250Vac ~ 305Vac
Capacitance Tolerance	±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1312VDC for 60s or 2000VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	2050Vac 50 Hz for 60s at +25°C
Insulation Resistance	>15,000 MΩ (C ≤ 0.33uF) at 100VDC 1 minute at +25°C >5,000 MΩ (C > 0.33uF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+ 85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad Steel Wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2% Test duration : 56 days C <sub>R</sub> ≤ 1μF, Capacitance change : ≤±5%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz C <sub>R</sub> > 1μF, Capacitance change : ≤±5%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +110°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.) +1000Vac/0.1s/h Test duration : 1000 hours C <sub>R</sub> ≤1μF, Capacitance change : ≤±10%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz C <sub>R</sub> > 1μF, Capacitance change : ≤±10%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C ±2°C Relative humidity (RH) :85% ±2% Loading Voltage: 240Vac (50Hz/60Hz) ; Test duration : 1000 hours Capacitance change : ≤±10%

## Metallized Polypropylene Film AC Capacitor For Capacitive Divider (Class X2) Temperature Humidity Bias (THB) AC Applications

### FXB series

#### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
305	630	0.10	18.0	13.5	7.5	15.0	40.0	400	0.8	FXB30K104E292EL5
305	630	0.15	18.0	14.5	8.5	15.0	60.0	400	0.8	FXB30K154E342EL5
305	630	0.22	18.0	16.0	10.0	15.0	88.0	400	0.8	FXB30K224E432EL5
305	630	0.33	18.0	19.0	11.0	15.0	132.0	400	0.8	FXB30K334E472EL5
305	630	0.47	26.0	20.0	11.0	22.5	94.0	200	0.8	FXB30K474F262FL5
305	630	0.56	26.0	20.0	11.0	22.5	112.0	200	0.8	FXB30K564F262FL5
305	630	0.68	26.0	22.0	12.0	22.5	136.0	200	0.8	FXB30K684F272FL5
305	630	0.82	26.0	22.0	12.0	22.5	164.0	200	0.8	FXB30K824F272FL5
305	630	1.0	26.0	23.0	13.0	22.5	200.0	200	0.8	FXB30K105F292FL5
305	630	1.0	32.0	22.0	13.0	27.5	100.0	100	0.8	FXB30K105G212GL5
305	630	1.2	32.0	28.0	14.0	27.5	120.0	100	0.8	FXB30K125G262GL5
305	630	1.5	32.0	28.0	14.0	27.5	150.0	100	0.8	FXB30K155G262GL5
305	630	1.8	32.0	33.0	18.0	27.5	180.0	100	0.8	FXB30K185G342GL5
305	630	2.0	32.0	33.0	18.0	27.5	200.0	100	0.8	FXB30K205G342GL5
305	630	2.2	32.0	33.0	18.0	27.5	220.0	100	0.8	FXB30K225G342GL5

\* Customized products are available by request, contact us for more details.

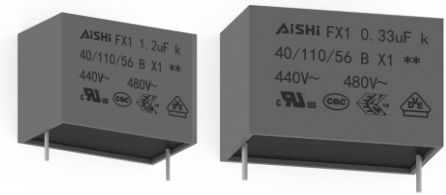
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Overview

The FX1 series is constructed of metallized polypropylene film encapsulated with self-extinguishing resin in a box of material meeting the requirement of UL94V-0.



### Applications

- Applications which required X1 safety classification
- EMI filters, spark killer
- UPS systems
- Renewable energy inverters

### Features

- High temperature (110°C)
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-14, EN 60384-14, UL 60384-14
Climatic Category	40/110/56 IEC 60068-1
Passive Flammability Class	B
Operating Temperature Range	-40°C to +110°C
Capacitance Range	0.001μF to 20.0μF
Rated Voltage	350Vac / 440Vac / 480Vac / 760Vac 50/60Hz
Capacitance Tolerance	±10% or ±20% at +25°C
Dissipation Factor (DF)	0.01μF≤C<1.0μF DF ≤ 0.001 (0.1%) at 1kHz at +25°C
	1.0μF≤C<10μF DF ≤ 0.002 (0.2%) at 1kHz at +25°C
	10μF≤C≤20μF DF ≤ 0.003 (0.3%) at 1kHz at +25°C
Test Voltage Between Terminals	4.3U <sub>R</sub> VDC for 60s or 3400VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	2U <sub>R</sub> +1500 Vac 50/60Hz for 60s at +25°C
Insulation Resistance	>15,000 MΩ (C ≤ 0.33uF) at 100VDC 1 minute at +25°C
	>5,000 MΩ (C > 0.33uF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad Steel Wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package
	Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	C <sub>R</sub> ≤1μF , Capacitance change : ≤±5%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz
	C <sub>R</sub> >1μF , Capacitance change : ≤±5%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz
Endurance Test	Insulation resistance: ≥50% of initial limit
	Test conditions & performance:
	Temperature: +110°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.) +1000Vac/0.1s/h
	Test duration : 1000 hours
	C <sub>R</sub> ≤1μF , Capacitance change : ≤±10%, DF change (Δtgδ):≤80 X 10 <sup>-4</sup> at 1KHz
C <sub>R</sub> >1μF , Capacitance change : ≤±10%, DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz	
	Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
350	760	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FX135K103C132CL5
350	760	0.012	13.0	11.0	5.0	10.0	6.0	500	0.6	FX135K123C132CL5
350	760	0.015	13.0	11.0	5.0	10.0	7.5	500	0.6	FX135K153C132CL5
350	760	0.018	13.0	11.0	5.0	10.0	9.0	500	0.6	FX135K183C132CL5
350	760	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FX135K223C132CL5
350	760	0.027	13.0	11.0	5.0	10.0	13.5	500	0.6	FX135K273C132CL5
350	760	0.033	13.0	11.0	5.0	10.0	16.5	500	0.6	FX135K333C132CL5
350	760	0.039	13.0	12.0	6.0	10.0	19.5	500	0.6	FX135K393C162CL5
350	760	0.047	13.0	12.0	6.0	10.0	23.5	500	0.6	FX135K473C162CL5
350	760	0.056	13.0	13.0	7.0	10.0	28.0	500	0.6	FX135K563C242CL5
350	760	0.068	13.0	14.0	8.0	10.0	34.0	500	0.6	FX135K683C262CL5
350	760	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FX135K103E142EL5
350	760	0.012	18.0	11.0	5.0	15.0	4.8	400	0.6	FX135K123E142EL5
350	760	0.015	18.0	11.0	5.0	15.0	6.0	400	0.6	FX135K153E142EL5
350	760	0.018	18.0	11.0	5.0	15.0	7.2	400	0.6	FX135K183E142EL5
350	760	0.022	18.0	11.0	5.0	15.0	8.8	400	0.6	FX135K223E142EL5
350	760	0.027	18.0	11.0	5.0	15.0	10.8	400	0.6	FX135K273E142EL5
350	760	0.033	18.0	11.0	5.0	15.0	13.2	400	0.6	FX135K333E142EL5
350	760	0.039	18.0	11.0	5.0	15.0	15.6	400	0.6	FX135K393E142EL5
350	760	0.047	18.0	11.0	5.0	15.0	18.8	400	0.6	FX135K473E142EL5
350	760	0.056	18.0	11.0	5.0	15.0	22.4	400	0.6	FX135K563E142EL5
350	760	0.068	18.0	12.0	6.0	15.0	27.2	400	0.6	FX135K683E172EL5
350	760	0.082	18.0	12.0	6.0	15.0	32.8	400	0.6	FX135K823E172EL5
350	760	0.10	18.0	13.0	7.0	15.0	40.0	400	0.8	FX135K104E212EL5
350	760	0.10	18.0	17.5	6.0	15.0	40.0	400	0.6	FX135K104E192EL5
350	760	0.12	18.0	13.5	7.5	15.0	48.0	400	0.8	FX135K124E292EL5
350	760	0.12	18.0	17.5	6.0	15.0	48.0	400	0.6	FX135K124E192EL5
350	760	0.15	18.0	14.0	8.0	15.0	60.0	400	0.8	FX135K154E312EL5
350	760	0.18	18.0	14.5	8.5	15.0	72.0	400	0.8	FX135K184E342EL5
350	760	0.22	18.0	16.0	10.0	15.0	88.0	400	0.8	FX135K224E432EL5
350	760	0.27	18.0	19.0	11.0	15.0	108.0	400	0.8	FX135K274E472EL5
350	760	0.33	18.0	19.0	11.0	15.0	132.0	400	0.8	FX135K334E472EL5
350	760	0.039	26.0	15.5	6.0	22.5	7.8	200	0.8	FX135K393F142FL5
350	760	0.047	26.0	15.5	6.0	22.5	9.4	200	0.8	FX135K473F142FL5
350	760	0.056	26.0	15.5	6.0	22.5	11.2	200	0.8	FX135K563F142FL5
350	760	0.068	26.0	15.5	6.0	22.5	13.6	200	0.8	FX135K683F142FL5
350	760	0.082	26.0	15.5	6.0	22.5	16.4	200	0.8	FX135K823F142FL5
350	760	0.10	26.0	15.5	6.0	22.5	20.0	200	0.8	FX135K104F142FL5
350	760	0.12	26.0	15.5	6.0	22.5	24.0	200	0.8	FX135K124F142FL5
350	760	0.15	26.0	15.5	6.0	22.5	30.0	200	0.8	FX135K154F142FL5
350	760	0.18	26.0	15.5	6.0	22.5	36.0	200	0.8	FX135K184F142FL5
350	760	0.22	26.0	16.5	7.0	22.5	44.0	200	0.8	FX135K224F172FL5
350	760	0.27	26.0	16.5	7.0	22.5	54.0	200	0.8	FX135K274F172FL5
350	760	0.33	26.0	17.0	8.5	22.5	66.0	200	0.8	FX135K334F202FL5
350	760	0.47	26.0	19.0	10.0	22.5	94.0	200	0.8	FX135K474F242FL5
350	760	0.56	26.0	20.0	11.0	22.5	112.0	200	0.8	FX135K564F262FL5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
350	760	0.68	26.0	22.0	12.0	22.5	136.0	200	0.8	FX135K684F272FL5
350	760	0.82	26.0	24.5	13.0	22.5	164.0	200	0.8	FX135K824F302FL5
350	760	1.0	26.0	25.0	15.0	22.5	200.0	200	0.8	FX135K105F362FL5
350	760	1.2	26.0	29.5	14.5	22.5	240.0	200	0.8	FX135K125F342FL5
350	760	0.15	32.0	18.0	9.0	27.5	22.5	150	0.8	FX135K154G152GL5
350	760	0.18	32.0	18.0	9.0	27.5	27.0	150	0.8	FX135K184G152GL5
350	760	0.22	32.0	18.0	9.0	27.5	33.0	150	0.8	FX135K224G152GL5
350	760	0.33	32.0	18.0	9.0	27.5	49.5	150	0.8	FX135K334G152GL5
350	760	0.39	32.0	18.0	9.0	27.5	58.5	150	0.8	FX135K394G152GL5
350	760	0.47	32.0	18.0	9.0	27.5	70.5	150	0.8	FX135K474G152GL5
350	760	0.56	32.0	20.0	11.0	27.5	84.0	150	0.8	FX135K564G182GL5
350	760	0.68	32.0	20.0	11.0	27.5	102.0	150	0.8	FX135K684G182GL5
350	760	0.82	32.0	20.0	11.0	27.5	123.0	150	0.8	FX135K824G182GL5
350	760	1.0	32.0	22.0	13.0	27.5	150.0	150	0.8	FX135K105G212GL5
350	760	1.0	32.0	24.5	13.0	27.5	150.0	150	0.8	FX135K105G222GL5
350	760	1.2	32.0	25.0	16.0	27.5	180.0	150	0.8	FX135K125G302GL5
350	760	1.2	32.0	28.0	14.0	27.5	180.0	150	0.8	FX135K125G262GL5
350	760	1.5	32.0	25.0	16.0	27.5	225.0	150	0.8	FX135K155G302GL5
350	760	1.5	32.0	28.0	14.0	27.5	225.0	150	0.8	FX135K155G262GL5
350	760	1.8	32.0	28.0	18.0	27.5	270.0	150	0.8	FX135K185G332GL5
350	760	2.2	32.0	28.0	18.0	27.5	330.0	150	0.8	FX135K225G332GL5
350	760	2.2	32.0	33.0	18.0	27.5	330.0	150	0.8	FX135K225G342GL5
350	760	2.7	32.0	37.0	22.0	27.5	405.0	150	0.8	FX135K275G402GL5
350	760	3.3	32.0	37.0	22.0	27.5	495.0	150	0.8	FX135K335G402GL5
350	760	0.39	42.5	22.0	11.0	37.5	39.0	100	1.0	FX135K394K102KL5
350	760	0.47	42.5	22.0	11.0	37.5	47.0	100	1.0	FX135K474K102KL5
350	760	0.56	42.5	22.0	11.0	37.5	56.0	100	1.0	FX135K564K102KL5
350	760	0.68	42.5	22.0	11.0	37.5	68.0	100	1.0	FX135K684K102KL5
350	760	0.82	42.5	22.0	11.0	37.5	82.0	100	1.0	FX135K824K102KL5
350	760	1.0	42.5	22.0	11.0	37.5	100.0	100	1.0	FX135K105K102KL5
350	760	1.2	42.5	24.0	13.0	37.5	120.0	100	1.0	FX135K125K112KL5
350	760	1.5	42.5	26.0	15.0	37.5	150.0	100	1.0	FX135K155K132KL5
350	760	1.8	42.5	26.0	15.0	37.5	180.0	100	1.0	FX135K185K132KL5
350	760	2.2	42.5	30.0	17.0	37.5	220.0	100	1.0	FX135K225K182KL5
350	760	2.2	42.5	28.0	19.0	37.5	220.0	100	1.0	FX135K225K202KL5
350	760	2.7	42.5	32.0	19.0	37.5	270.0	100	1.0	FX135K275K212KL5
350	760	3.3	42.5	32.0	19.0	37.5	330.0	100	1.0	FX135K335K212KL5
350	760	4.7	42.5	37.0	22.0	37.5	470.0	100	1.0	FX135K475K272KL5
350	760	5.6	42.5	44.0	24.0	37.5	560.0	100	1.0	FX135K565K322KL5
350	760	6.8	42.5	43.0	28.0	37.5	680.0	100	1.0	FX135K685K392KL5
350	760	8.2	42.5	45.0	30.0	37.5	820.0	100	1.0	FX135K825K422KL5
350	760	8.2	57.5	45.0	30.0	52.5	492.0	60	1.2	FX135K825M162ML5
350	760	10	57.5	45.0	30.0	52.5	600.0	60	1.2	FX135K106M162ML5
350	760	12	57.5	45.0	30.0	52.5	720.0	60	1.2	FX135K126M162ML5
350	760	15	57.5	50.0	35.0	52.5	900.0	60	1.2	FX135K156M202ML5
350	760	20	57.5	65.0	45.0	52.5	1,200.0	60	1.2	FX135K206M342ML5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
440/480	1000	0.0010	10.0	11.0	5.0	7.5	0.6	600	0.6	FX148K102B152BL5
440/480	1000	0.0012	10.0	11.0	5.0	7.5	0.7	600	0.6	FX148K122B152BL5
440/480	1000	0.0015	10.0	11.0	5.0	7.5	0.9	600	0.6	FX148K152B152BL5
440/480	1000	0.0018	10.0	11.0	5.0	7.5	1.1	600	0.6	FX148K182B152BL5
440/480	1000	0.0022	10.0	11.0	5.0	7.5	1.3	600	0.6	FX148K222B152BL5
440/480	1000	0.0027	10.0	11.0	5.0	7.5	1.6	600	0.6	FX148K272B152BL5
440/480	1000	0.0033	10.0	11.0	5.0	7.5	2.0	600	0.6	FX148K332B152BL5
440/480	1000	0.0039	10.0	11.0	5.0	7.5	2.3	600	0.6	FX148K392B152BL5
440/480	1000	0.0047	10.0	11.0	5.0	7.5	2.8	600	0.6	FX148K472B152BL5
440/480	1000	0.0056	10.0	11.0	5.0	7.5	3.4	600	0.6	FX148K562B152BL5
440/480	1000	0.0068	10.0	12.0	6.0	7.5	4.1	600	0.6	FX148K682B162BL5
440/480	1000	0.0082	10.0	12.0	6.0	7.5	4.9	600	0.6	FX148K822B162BL5
440/480	1000	0.010	10.0	12.0	6.0	7.5	6.0	600	0.6	FX148K103B162BL5
440/480	1000	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FX148K103C132CL5
440/480	1000	0.012	13.0	11.0	5.0	10.0	6.0	500	0.6	FX148K123C132CL5
440/480	1000	0.015	13.0	11.0	5.0	10.0	7.5	500	0.6	FX148K153C132CL5
440/480	1000	0.018	13.0	11.0	5.0	10.0	9.0	500	0.6	FX148K183C132CL5
440/480	1000	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FX148K223C132CL5
440/480	1000	0.027	13.0	12.0	6.0	10.0	13.5	500	0.6	FX148K273C162CL5
440/480	1000	0.033	13.0	12.0	6.0	10.0	16.5	500	0.6	FX148K333C162CL5
440/480	1000	0.039	13.0	13.0	7.0	10.0	19.5	500	0.6	FX148K393C242CL5
440/480	1000	0.047	13.0	14.0	8.0	10.0	23.5	500	0.6	FX148K473C262CL5
440/480	1000	0.056	13.0	14.0	8.0	10.0	28.0	500	0.6	FX148K563C262CL5
440/480	1000	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FX148K103E142EL5
440/480	1000	0.012	18.0	11.0	5.0	15.0	4.8	400	0.6	FX148K123E142EL5
440/480	1000	0.015	18.0	11.0	5.0	15.0	6.0	400	0.6	FX148K153E142EL5
440/480	1000	0.018	18.0	11.0	5.0	15.0	7.2	400	0.6	FX148K183E142EL5
440/480	1000	0.022	18.0	11.0	5.0	15.0	8.8	400	0.6	FX148K223E142EL5
440/480	1000	0.027	18.0	11.0	5.0	15.0	10.8	400	0.6	FX148K273E142EL5
440/480	1000	0.033	18.0	11.0	5.0	15.0	13.2	400	0.6	FX148K333E142EL5
440/480	1000	0.039	18.0	12.0	6.0	15.0	15.6	400	0.6	FX148K393E172EL5
440/480	1000	0.047	18.0	12.0	6.0	15.0	18.8	400	0.6	FX148K473E172EL5
440/480	1000	0.056	18.0	13.0	7.0	15.0	22.4	400	0.8	FX148K563E212EL5
440/480	1000	0.068	18.0	13.5	7.5	15.0	27.2	400	0.8	FX148K683E292EL5
440/480	1000	0.082	18.0	14.0	8.0	15.0	32.8	400	0.8	FX148K823E312EL5
440/480	1000	0.10	18.0	14.5	8.5	15.0	40.0	400	0.8	FX148K104E342EL5
440/480	1000	0.12	18.0	16.0	10.0	15.0	48.0	400	0.8	FX148K124E432EL5
440/480	1000	0.15	18.0	19.0	11.0	15.0	60.0	400	0.8	FX148K154E472EL5
440/480	1000	0.18	18.0	19.0	11.0	15.0	72.0	400	0.8	FX148K184E472EL5
440/480	1000	0.22	18.0	22.0	12.5	15.0	88.0	400	0.8	FX148K224E522EL5
440/480	1000	0.039	26.0	15.5	6.0	22.5	7.8	200	0.6	FX148K393F142FL5
440/480	1000	0.047	26.0	15.5	6.0	22.5	9.4	200	0.6	FX148K473F142FL5
440/480	1000	0.056	26.0	15.5	6.0	22.5	11.2	200	0.6	FX148K563F142FL5
440/480	1000	0.068	26.0	15.5	6.0	22.5	13.6	200	0.6	FX148K683F142FL5
440/480	1000	0.082	26.0	15.5	6.0	22.5	16.4	200	0.6	FX148K823F142FL5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
440/480	1000	0.10	26.0	15.5	6.0	22.5	20.0	200	0.8	FX148K104F142FL5
440/480	1000	0.12	26.0	15.5	6.0	22.5	24.0	200	0.8	FX148K124F142FL5
440/480	1000	0.15	26.0	16.5	7.0	22.5	30.0	200	0.8	FX148K154F172FL5
440/480	1000	0.18	26.0	17.0	8.5	22.5	36.0	200	0.8	FX148K184F202FL5
440/480	1000	0.22	26.0	17.0	8.5	22.5	44.0	200	0.8	FX148K224F202FL5
440/480	1000	0.27	26.0	19.0	10.0	22.5	54.0	200	0.8	FX148K274F242FL5
440/480	1000	0.33	26.0	20.0	11.0	22.5	66.0	200	0.8	FX148K334F262FL5
440/480	1000	0.39	26.0	20.0	11.0	22.5	78.0	200	0.8	FX148K394F262FL5
440/480	1000	0.47	26.0	24.5	13.0	22.5	94.0	200	0.8	FX148K474F302FL5
440/480	1000	0.56	26.0	25.0	15.0	22.5	112.0	200	0.8	FX148K564F362FL5
440/480	1000	0.68	26.0	29.5	14.5	22.5	136.0	200	0.8	FX148K684F342FL5
440/480	1000	0.15	32.0	18.0	9.0	27.5	22.5	150	0.8	FX148K154G152GL5
440/480	1000	0.18	32.0	18.0	9.0	27.5	27.0	150	0.8	FX148K184G152GL5
440/480	1000	0.22	32.0	18.0	9.0	27.5	33.0	150	0.8	FX148K224G152GL5
440/480	1000	0.33	32.0	18.0	9.0	27.5	49.5	150	0.8	FX148K334G152GL5
440/480	1000	0.39	32.0	20.0	11.0	27.5	58.5	150	0.8	FX148K394G182GL5
440/480	1000	0.47	32.0	20.0	11.0	27.5	70.5	150	0.8	FX148K474G182GL5
440/480	1000	0.56	32.0	22.0	13.0	27.5	84.0	150	0.8	FX148K564G212GL5
440/480	1000	0.68	32.0	24.5	13.0	27.5	102.0	150	0.8	FX148K684G222GL5
440/480	1000	0.82	32.0	25.0	16.0	27.5	123.0	150	0.8	FX148K824G302GL5
440/480	1000	0.82	32.0	28.0	14.0	27.5	123.0	150	0.8	FX148K824G262GL5
440/480	1000	1.0	32.0	28.0	18.0	27.5	150.0	150	0.8	FX148K105G332GL5
440/480	1000	1.2	32.0	33.0	18.0	27.5	180.0	150	0.8	FX148K125G342GL5
440/480	1000	1.5	32.0	33.0	18.0	27.5	225.0	150	0.8	FX148K155G342GL5
440/480	1000	1.8	32.0	37.0	22.0	27.5	270.0	150	0.8	FX148K185G402GL5
440/480	1000	0.33	42.5	22.0	11.0	37.5	33.0	100	1.0	FX148K334K102KL5
440/480	1000	0.39	42.5	22.0	11.0	37.5	39.0	100	1.0	FX148K394K102KL5
440/480	1000	0.47	42.5	22.0	11.0	37.5	47.0	100	1.0	FX148K474K102KL5
440/480	1000	0.56	42.5	22.0	11.0	37.5	56.0	100	1.0	FX148K564K102KL5
440/480	1000	0.68	42.5	22.0	11.0	37.5	68.0	100	1.0	FX148K684K102KL5
440/480	1000	0.82	42.5	24.0	13.0	37.5	82.0	100	1.0	FX148K824K112KL5
440/480	1000	1.0	42.5	24.0	13.0	37.5	100.0	100	1.0	FX148K105K112KL5
440/480	1000	1.2	42.5	26.0	15.0	37.5	120.0	100	1.0	FX148K125K132KL5
440/480	1000	1.5	42.5	30.0	17.0	37.5	150.0	100	1.0	FX148K155K182KL5
440/480	1000	1.8	42.5	28.0	19.0	37.5	180.0	100	1.0	FX148K185K202KL5
440/480	1000	2.2	42.5	32.0	19.0	37.5	220.0	100	1.0	FX148K225K212KL5
440/480	1000	2.7	42.5	37.0	22.0	37.5	270.0	100	1.0	FX148K275K272KL5
440/480	1000	3.3	42.5	44.0	24.0	37.5	330.0	100	1.0	FX148K335K322KL5
440/480	1000	3.9	42.5	43.0	28.0	37.5	390.0	100	1.0	FX148K395K392KL5
440/480	1000	4.7	42.5	45.0	30.0	37.5	470.0	100	1.0	FX148K475K422KL5
440/480	1000	5.6	57.5	45.0	30.0	52.5	336.0	60	1.2	FX148K565M162ML5
440/480	1000	6.8	57.5	45.0	30.0	52.5	408.0	60	1.2	FX148K685M162ML5
440/480	1000	8.2	57.5	50.0	35.0	52.5	492.0	60	1.2	FX148K825M202ML5
440/480	1000	10	57.5	50.0	35.0	52.5	600.0	60	1.2	FX148K106M202ML5
440/480	1000	15	57.5	65.0	45.0	52.5	900.0	60	1.2	FX148K156M342ML5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
530	1000	0.0068	18.0	11.0	5.0	15.0	2.7	400	0.6	FX153K682E142EL5
530	1000	0.0082	18.0	11.0	5.0	15.0	3.3	400	0.6	FX153K822E142EL5
530	1000	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FX153K103E142EL5
530	1000	0.022	18.0	12.0	6.0	15.0	8.8	400	0.6	FX153K223E172EL5
530	1000	0.330	18.0	13.5	7.5	15.0	132.0	400	0.8	FX153K334E292EL5
530	1000	0.047	18.0	14.5	8.5	15.0	18.8	400	0.8	FX153K473E342EL5
530	1000	0.056	18.0	14.5	8.5	15.0	22.4	400	0.8	FX153K563E342EL5
530	1000	0.068	18.0	18.0	9.0	15.0	27.2	400	0.8	FX153K683E392EL5
530	1000	0.10	18.0	19.0	11.0	15.0	40.0	400	0.8	FX153K104E472EL5
530	1000	0.033	26.0	15.5	6.0	22.5	6.6	200	0.8	FX153K333F142FL5
530	1000	0.047	26.0	15.5	6.0	22.5	9.4	200	0.8	FX153K473F142FL5
530	1000	0.056	26.0	15.5	6.0	22.5	11.2	200	0.8	FX153K563F142FL5
530	1000	0.068	26.0	15.5	6.0	22.5	13.6	200	0.8	FX153K683F142FL5
530	1000	0.082	26.0	15.5	6.0	22.5	16.4	200	0.8	FX153M823F142FL5
530	1000	0.10	26.0	16.5	7.0	22.5	20.0	200	0.8	FX153K104F172FL5
530	1000	0.15	26.0	17.0	8.5	22.5	30.0	200	0.8	FX153K154F202FL5
530	1000	0.22	26.0	19.0	10.0	22.5	44.0	200	0.8	FX153K224F242FL5
530	1000	0.33	26.0	20.0	11.0	22.5	66.0	200	0.8	FX153M334F262FL5
530	1000	0.33	26.0	22.0	12.0	22.5	66.0	200	0.8	FX153K334F272FL5
530	1000	0.47	26.0	29.5	14.5	22.5	94.0	200	0.8	FX153K474F342FL5
530	1000	0.15	32.0	20.0	11.0	27.5	22.5	150	0.8	FX153K154G182GL5
530	1000	0.22	32.0	20.0	11.0	27.5	33.0	150	0.8	FX153K224G182GL5
530	1000	0.33	32.0	20.0	11.0	27.5	49.5	150	0.8	FX153M334G182GL5
530	1000	0.47	32.0	22.0	13.0	27.5	70.5	150	0.8	FX153M474G212GL5
530	1000	0.47	32.0	24.5	13.0	27.5	70.5	150	0.8	FX153K474G222GL5
530	1000	0.56	32.0	24.5	13.0	27.5	84.0	150	0.8	FX153K564G222GL5
530	1000	0.68	32.0	24.5	15.0	27.5	102.0	150	0.8	FX153M684G272GL5
530	1000	0.68	32.0	28.0	18.0	27.5	102.0	150	0.8	FX153K684G332GL5
530	1000	0.82	32.0	28.0	18.0	27.5	123.0	150	0.8	FX153K824G332GL5
530	1000	1.0	32.0	28.0	18.0	27.5	150.0	150	0.8	FX153M105G332GL5
530	1000	1.5	32.0	37.0	22.0	27.5	225.0	150	0.8	FX153K155G402GL5
530	1000	1.8	32.0	37.0	22.0	27.5	270.0	150	0.8	FX153M185G402GL5
530	1000	0.56	42.5	22.0	11.0	37.5	56.0	100	1.0	FX153K564K102KL5
530	1000	0.68	42.5	22.0	11.0	37.5	68.0	100	1.0	FX153K684K102KL5
530	1000	0.82	42.5	26.0	15.0	37.5	82.0	100	1.0	FX153K824K132KL5
530	1000	1.0	42.5	26.0	15.0	37.5	100.0	100	1.0	FX153M105K132KL5
530	1000	1.0	42.5	30.0	17.0	37.5	100.0	100	1.0	FX153K105K182KL5
530	1000	1.5	42.5	30.0	17.0	37.5	150.0	100	1.0	FX153M155K182KL5
530	1000	1.5	42.5	32.0	19.0	37.5	150.0	100	1.0	FX153K155K212KL5
530	1000	2.2	42.5	40.0	20.0	37.5	220.0	100	1.0	FX153K225K242KL5
530	1000	3.3	42.5	43.0	28.0	37.5	330.0	100	1.0	FX153K335K392KL5
530	1000	4.7	42.5	50.0	35.0	37.5	470.0	100	1.0	FX153K475K472KL5
530	1000	4.7	57.5	45.0	30.0	52.5	188.0	40	1.2	FX153K475M164MD5
530	1000	5.6	57.5	45.0	30.0	52.5	224.0	40	1.2	FX153M565M164MD5
530	1000	5.6	57.5	50.0	35.0	52.5	224.0	40	1.2	FX153K565M204MD5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
760	1000	0.0047	18.0	11.0	5.0	15.0	2.4	500	0.6	FX176K472E142EL5
760	1000	0.0056	18.0	11.0	5.0	15.0	2.8	500	0.6	FX176K562E142EL5
760	1000	0.0068	18.0	11.0	5.0	15.0	3.4	500	0.6	FX176K682E142EL5
760	1000	0.0082	18.0	11.0	5.0	15.0	4.1	500	0.6	FX176K822E142EL5
760	1000	0.010	18.0	11.0	5.0	15.0	5.0	500	0.8	FX176K103E142EL5
760	1000	0.012	18.0	12.0	6.0	15.0	6.0	500	0.6	FX176K123E172EL5
760	1000	0.015	18.0	12.0	6.0	15.0	7.5	500	0.6	FX176K153E172EL5
760	1000	0.018	18.0	13.0	7.0	15.0	9.0	500	0.6	FX176K183E212EL5
760	1000	0.022	18.0	13.5	7.5	15.0	11.0	500	0.6	FX176K223E292EL5
760	1000	0.027	18.0	14.0	8.0	15.0	13.5	500	0.6	FX176K273E312EL5
760	1000	0.033	18.0	14.5	8.5	15.0	16.5	500	0.6	FX176K333E342EL5
760	1000	0.039	18.0	16.0	10.0	15.0	19.5	500	0.6	FX176K393E432EL5
760	1000	0.047	18.0	19.0	11.0	15.0	23.5	500	0.8	FX176K473E472EL5
760	1000	0.056	18.0	22.0	12.5	15.0	28.0	500	0.6	FX176K563E522EL5
760	1000	0.010	26.0	15.5	6.0	22.5	3.0	300	0.6	FX176K103F142EL5
760	1000	0.012	26.0	15.5	6.0	22.5	3.6	300	0.6	FX176K123F142EL5
760	1000	0.015	26.0	15.5	6.0	22.5	4.5	300	0.6	FX176K153F142EL5
760	1000	0.018	26.0	15.5	6.0	22.5	5.4	300	0.6	FX176K183F142EL5
760	1000	0.022	26.0	15.5	6.0	22.5	6.6	300	0.6	FX176K223F142EL5
760	1000	0.027	26.0	15.5	6.0	22.5	8.1	300	0.6	FX176K273F142EL5
760	1000	0.033	26.0	15.5	6.0	22.5	9.9	300	0.8	FX176K333F142EL5
760	1000	0.047	26.0	15.5	6.0	22.5	14.1	300	0.6	FX176K473F142EL5
760	1000	0.056	26.0	16.5	7.0	22.5	16.8	300	0.6	FX176K563F172EL5
760	1000	0.068	26.0	16.5	7.0	22.5	20.4	300	0.6	FX176K683F172EL5
760	1000	0.082	26.0	17.0	8.5	22.5	24.6	300	0.6	FX176K823F202EL5
760	1000	0.10	26.0	19.0	10.0	22.5	30.0	300	0.6	FX176K104F242EL5
760	1000	0.12	26.0	19.0	10.0	22.5	36.0	300	0.6	FX176K124F242EL5
760	1000	0.15	26.0	19.0	10.0	22.5	45.0	300	0.6	FX176K154F242EL5
760	1000	0.18	26.0	20.0	11.0	22.5	54.0	300	0.8	FX176K184F262EL5
760	1000	0.22	26.0	23.0	13.0	22.5	66.0	300	0.6	FX176K224F292EL5
760	1000	0.27	26.0	25.0	15.0	22.5	81.0	300	0.6	FX176K274F362EL5
760	1000	0.33	26.0	29.5	14.5	22.5	99.0	300	0.6	FX176K334F342EL5
760	1000	0.056	32.0	18.0	9.0	22.5	16.8	300	0.6	FX176K563G152EL5
760	1000	0.068	32.0	18.0	9.0	27.5	13.6	200	0.8	FX176K683G152EL5
760	1000	0.082	32.0	18.0	9.0	27.5	16.4	200	0.8	FX176K823G152EL5
760	1000	0.10	32.0	18.0	9.0	27.5	20.0	200	0.8	FX176K104G152EL5
760	1000	0.12	32.0	18.0	9.0	27.5	24.0	200	0.8	FX176K124G152EL5
760	1000	0.15	32.0	19.0	10.0	27.5	30.0	200	0.8	FX176K154G172EL5
760	1000	0.18	32.0	20.0	11.0	27.5	36.0	200	0.8	FX176K184G182EL5
760	1000	0.22	32.0	22.0	13.0	27.5	44.0	200	0.8	FX176K224G212EL5
760	1000	0.27	32.0	24.0	14.0	27.5	54.0	200	0.8	FX176K274G252EL5
760	1000	0.33	32.0	24.5	15.0	27.5	66.0	200	0.8	FX176K334G272EL5
760	1000	0.33	32.0	28.0	14.0	27.5	66.0	200	0.8	FX176K334G262EL5
760	1000	0.39	32.0	33.0	18.0	27.5	78.0	200	0.8	FX176K394G342EL5
760	1000	0.47	32.0	33.0	18.0	27.5	94.0	200	0.8	FX176K474G342EL5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class X1) AC Applications

## FX1 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
760	1000	0.56	32.0	33.0	18.0	27.5	112.0	200	0.8	FX176K564G342EL5
760	1000	0.68	32.0	37.0	22.0	27.5	136.0	200	0.8	FX176K684G402EL5
760	1000	0.33	42.5	24.0	13.0	37.5	49.5	150	1.0	FX176K334K112EL5
760	1000	0.33	42.5	26.0	12.0	37.5	49.5	150	1.0	FX176K334K652EL5
760	1000	0.39	42.5	24.0	13.0	37.5	58.5	150	1.0	FX176K394K112EL5
760	1000	0.39	42.5	26.0	12.0	37.5	58.5	150	1.0	FX176K394K652EL5
760	1000	0.47	42.5	26.0	15.0	37.5	70.5	150	1.0	FX176K474K132EL5
760	1000	0.47	42.5	28.0	14.0	37.5	70.5	150	1.0	FX176K474K662EL5
760	1000	0.56	42.5	32.0	16.0	37.5	84.0	150	1.0	FX176K564K152EL5
760	1000	0.56	42.5	28.0	19.0	37.5	84.0	150	1.0	FX176K564K202EL5
760	1000	0.68	42.5	32.0	19.0	37.5	102.0	150	1.0	FX176K684K212EL5
760	1000	0.82	42.5	28.0	19.0	37.5	123.0	150	1.0	FX176K824K202EL5
760	1000	1.0	42.5	32.0	19.0	37.5	150.0	150	1.0	FX176K105K212EL5
760	1000	1.0	42.5	37.0	22.0	37.5	150.0	150	1.0	FX176K105K272EL5
760	1000	1.2	42.5	37.0	22.0	37.5	180.0	150	1.0	FX176K125K272EL5
760	1000	1.2	42.5	40.0	20.0	37.5	180.0	150	1.0	FX176K125K242EL5
760	1000	1.5	42.5	44.0	24.0	37.5	225.0	150	1.0	FX176K155K322EL5
760	1000	1.5	42.5	37.0	28.0	37.5	225.0	150	1.0	FX176K155K372EL5
760	1000	1.8	42.5	43.0	28.0	37.5	270.0	150	1.0	FX176K185K392EL5
760	1000	1.8	42.5	45.0	30.0	37.5	270.0	150	1.0	FX176K185K422EL5
760	1000	2.2	42.5	50.0	35.0	37.5	330.0	150	1.0	FX176K225K472EL5

\* Customized products are available by request, contact us for more details.

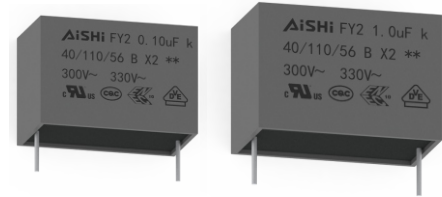
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class Y2) AC Applications

## FY2 series

### Overview

The FY2 series is constructed of metallized polypropylene film encapsulated with self-extinguishing resin in a box of material meeting the requirement of UL94V-0.



### Applications

- Applications which required Y2 safety classification
- EMI filters, spark killer
- UPS systems
- Renewable energy inverters
- Not suitable for “series with mains” applications

### Features

- High temperature (110°C)
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-14, EN 60384-14, UL 60384-14
Climatic Category	40/110/56 IEC 60068-1
Passive Flammability Class	B
Operating Temperature Range	-40°C to +110°C
Capacitance Range	0.001μF to 1.0μF
Rated Voltage	300Vac / 330Vac 50/60Hz
Capacitance Tolerance	±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 1kHz at +25°C
Test Voltage Between Terminals	$U_R + 1200\text{Vac}$ for 60s or 4000VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	$2U_R + 1500\text{ Vac}$ 50/60Hz for 60s at +25°C
Insulation Resistance	>15,000 MΩ (C ≤ 0.33μF) at 100VDC 1 minute at +25°C >5,000 MΩ (C > 0.33μF) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at $U_n$ @ Hot-Spot temperature $T = +85^\circ\text{C}$
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad Steel Wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change ( $\Delta\text{tg}\delta$ ): ≤80 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +110°C ±2°C Voltage applied: 1.25 X $V_R$ (a.c.) +1000Vac/0.1s/h
	Test duration : 1000 hours
	Capacitance change : ≤±10% DF change ( $\Delta\text{tg}\delta$ ): ≤80 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Interference Suppressor Class Y2) AC Applications

## FY2 series

### Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
300/330	1500	0.0010	10.0	11.0	5.0	7.5	0.6	600	0.6	FY230K102B152BL5
300/330	1500	0.0012	10.0	11.0	5.0	7.5	0.7	600	0.6	FY230K122B152BL5
300/330	1500	0.0015	10.0	11.0	5.0	7.5	0.9	600	0.6	FY230K152B152BL5
300/330	1500	0.0018	10.0	11.0	5.0	7.5	1.1	600	0.6	FY230K182B152BL5
300/330	1500	0.0022	10.0	11.0	5.0	7.5	1.3	600	0.6	FY230K222B152BL5
300/330	1500	0.0027	10.0	11.0	5.0	7.5	1.6	600	0.6	FY230K272B152BL5
300/330	1500	0.0033	10.0	11.0	5.0	7.5	2.0	600	0.6	FY230K332B152BL5
300/330	1500	0.0039	10.0	11.0	5.0	7.5	2.3	600	0.6	FY230K392B152BL5
300/330	1500	0.0047	10.0	12.0	6.0	7.5	2.8	600	0.6	FY230K472B162BL5
300/330	1500	0.0056	10.0	12.0	6.0	7.5	3.4	600	0.6	FY230K562B162BL5
300/330	1500	0.0010	13.0	11.0	5.0	10.0	0.5	500	0.6	FY230K102C132CL5
300/330	1500	0.0012	13.0	11.0	5.0	10.0	0.6	500	0.6	FY230K122C132CL5
300/330	1500	0.0015	13.0	11.0	5.0	10.0	0.8	500	0.6	FY230K152C132CL5
300/330	1500	0.0018	13.0	11.0	5.0	10.0	0.9	500	0.6	FY230K182C132CL5
300/330	1500	0.0022	13.0	11.0	5.0	10.0	1.1	500	0.6	FY230K222C132CL5
300/330	1500	0.0027	13.0	11.0	5.0	10.0	1.4	500	0.6	FY230K272C132CL5
300/330	1500	0.0033	13.0	11.0	5.0	10.0	1.7	500	0.6	FY230K332C132CL5
300/330	1500	0.0039	13.0	11.0	5.0	10.0	2.0	500	0.6	FY230K392C132CL5
300/330	1500	0.0047	13.0	11.0	5.0	10.0	2.4	500	0.6	FY230K472C132CL5
300/330	1500	0.0056	13.0	11.0	5.0	10.0	2.8	500	0.6	FY230K562C132CL5
300/330	1500	0.0068	13.0	11.0	5.0	10.0	3.4	500	0.6	FY230K682C132CL5
300/330	1500	0.0082	13.0	12.0	6.0	10.0	4.1	500	0.6	FY230K822C162CL5
300/330	1500	0.010	13.0	12.0	6.0	10.0	5.0	500	0.6	FY230K103C162CL5
300/330	1500	0.012	13.0	12.0	6.0	10.0	6.0	500	0.6	FY230K123C162CL5
300/330	1500	0.015	13.0	12.0	6.0	10.0	7.5	500	0.6	FY230K153C162CL5
300/330	1500	0.0022	18.0	11.0	5.0	15.0	0.9	400	0.6	FY230K222E142EL5
300/330	1500	0.0027	18.0	11.0	5.0	15.0	1.1	400	0.6	FY230K272E142EL5
300/330	1500	0.0033	18.0	11.0	5.0	15.0	1.3	400	0.6	FY230K332E142EL5
300/330	1500	0.0039	18.0	11.0	5.0	15.0	1.6	400	0.6	FY230K392E142EL5
300/330	1500	0.0047	18.0	11.0	5.0	15.0	1.9	400	0.6	FY230K472E142EL5
300/330	1500	0.0056	18.0	11.0	5.0	15.0	2.2	400	0.6	FY230K562E142EL5
300/330	1500	0.0068	18.0	11.0	5.0	15.0	2.7	400	0.6	FY230K682E142EL5
300/330	1500	0.0082	18.0	11.0	5.0	15.0	3.3	400	0.6	FY230K822E142EL5
300/330	1500	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FY230K103E142EL5
300/330	1500	0.012	18.0	11.0	5.0	15.0	4.8	400	0.6	FY230K123E142EL5
300/330	1500	0.015	18.0	11.0	5.0	15.0	6.0	400	0.6	FY230K153E142EL5
300/330	1500	0.018	18.0	12.0	6.0	15.0	7.2	400	0.6	FY230K183E172EL5
300/330	1500	0.022	18.0	12.0	6.0	15.0	8.8	400	0.6	FY230K223E172EL5
300/330	1500	0.027	18.0	13.0	7.0	15.0	10.8	400	0.8	FY230K273E212EL5
300/330	1500	0.033	18.0	13.5	7.5	15.0	13.2	400	0.8	FY230K333E292EL5
300/330	1500	0.039	18.0	13.5	7.5	15.0	15.6	400	0.8	FY230K393E292EL5
300/330	1500	0.047	18.0	14.5	8.5	15.0	18.8	400	0.8	FY230K473E342EL5
300/330	1500	0.056	18.0	16.0	10.0	15.0	22.4	400	0.8	FY230K563E432EL5
300/330	1500	0.068	18.0	16.0	10.0	15.0	27.2	400	0.8	FY230K683E432EL5
300/330	1500	0.082	18.0	19.0	11.0	15.0	32.8	400	0.8	FY230K823E472EL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.



# Metallized Polypropylene Film Capacitor (Interference Suppressor Class Y2) AC Applications

## FY2 series

### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
300/330	1500	0.033	26.0	15.5	6.0	22.5	6.6	200	0.6	FY230K333F142FL5
300/330	1500	0.039	26.0	15.5	6.0	22.5	7.8	200	0.6	FY230K393F142FL5
300/330	1500	0.047	26.0	15.5	6.0	22.5	9.4	200	0.6	FY230K473F142FL5
300/330	1500	0.056	26.0	15.5	6.0	22.5	11.2	200	0.6	FY230K563F142FL5
300/330	1500	0.068	26.0	16.5	7.0	22.5	13.6	200	0.8	FY230K683F172FL5
300/330	1500	0.082	26.0	16.5	7.0	22.5	16.4	200	0.8	FY230K823F172FL5
300/330	1500	0.10	26.0	17.0	8.5	22.5	20.0	200	0.8	FY230K104F202FL5
300/330	1500	0.12	26.0	17.0	8.5	22.5	24.0	200	0.8	FY230K124F202FL5
300/330	1500	0.15	26.0	19.0	10.0	22.5	30.0	200	0.8	FY230K154F242FL5
300/330	1500	0.18	26.0	20.0	11.0	22.5	36.0	200	0.8	FY230K184F262FL5
300/330	1500	0.22	26.0	22.0	12.0	22.5	44.0	200	0.8	FY230K224F272FL5
300/330	1500	0.27	26.0	24.5	13.0	22.5	54.0	200	0.8	FY230K274F302FL5
300/330	1500	0.33	26.0	25.0	15.0	22.5	66.0	200	0.8	FY230K334F362FL5
300/330	1500	0.39	26.0	29.5	14.5	22.5	78.0	200	0.8	FY230K394F342FL5
300/330	1500	0.10	32.0	18.0	9.0	27.5	15.0	150	0.8	FY230K104G152GL5
300/330	1500	0.12	32.0	18.0	9.0	27.5	18.0	150	0.8	FY230K124G152GL5
300/330	1500	0.15	32.0	18.0	9.0	27.5	22.5	150	0.8	FY230K154G152GL5
300/330	1500	0.18	32.0	20.0	11.0	27.5	27.0	150	0.8	FY230K184G182GL5
300/330	1500	0.22	32.0	20.0	11.0	27.5	33.0	150	0.8	FY230K224G182GL5
300/330	1500	0.27	32.0	22.0	13.0	27.5	40.5	150	0.8	FY230K274G212GL5
300/330	1500	0.33	32.0	24.5	13.0	27.5	49.5	150	0.8	FY230K334G222GL5
300/330	1500	0.39	32.0	25.0	16.0	27.5	58.5	150	0.8	FY230K394G302GL5
300/330	1500	0.39	32.0	28.0	14.0	27.5	58.5	150	0.8	FY230K394G262GL5
300/330	1500	0.47	32.0	28.0	18.0	27.5	70.5	150	0.8	FY230K474G332GL5
300/330	1500	0.56	32.0	28.0	18.0	27.5	84.0	150	0.8	FY230K564G332GL5
300/330	1500	0.68	32.0	33.0	18.0	27.5	102.0	150	0.8	FY230K684G342GL5
300/330	1500	0.82	32.0	37.0	22.0	27.5	123.0	150	0.8	FY230K824G402GL5
300/330	1500	1.0	32.0	37.0	22.0	27.5	150.0	150	0.8	FY230K105G402GL5
300/330	1500	0.33	42.5	22.0	11.0	37.5	33.0	100	1.0	FY230K334K102KL5
300/330	1500	0.39	42.5	24.0	13.0	37.5	39.0	100	1.0	FY230K394K112KL5
300/330	1500	0.47	42.5	24.0	13.0	37.5	47.0	100	1.0	FY230K474K112KL5
300/330	1500	0.56	42.5	26.0	15.0	37.5	56.0	100	1.0	FY230K564K132KL5
300/330	1500	0.68	42.5	30.0	17.0	37.5	68.0	100	1.0	FY230K684K182KL5
300/330	1500	0.82	42.5	30.0	17.0	37.5	82.0	100	1.0	FY230K824K182KL5
300/330	1500	0.82	42.5	28.0	19.0	37.5	82.0	100	1.0	FY230K824K202KL5
300/330	1500	1.0	42.5	32.0	19.0	37.5	100.0	100	1.0	FY230K105K212KL5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class Y2) AC Applications

## FY2 series

### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
350	1500	0.0047	18.0	11.0	5.0	15.0	2.8	600	0.6	FY235K472E142EL5
350	1500	0.0056	18.0	11.0	5.0	15.0	3.4	600	0.6	FY235K562E142EL5
350	1500	0.0068	18.0	11.0	5.0	15.0	4.1	600	0.6	FY235K682E142EL5
350	1500	0.0082	18.0	11.0	5.0	15.0	4.9	600	0.6	FY235K822E142EL5
350	1500	0.010	18.0	11.0	5.0	15.0	6.0	600	0.6	FY235K103E142EL5
350	1500	0.012	18.0	12.0	6.0	15.0	7.2	600	0.8	FY235K123E172EL5
350	1500	0.015	18.0	12.0	6.0	15.0	9.0	600	0.8	FY235K153E172EL5
350	1500	0.018	18.0	13.0	7.0	15.0	10.8	600	0.8	FY235K183E212EL5
350	1500	0.022	18.0	13.0	7.0	15.0	13.2	600	0.8	FY235K223E212EL5
350	1500	0.027	18.0	14.0	8.0	15.0	16.2	600	0.8	FY235K273E312EL5
350	1500	0.033	18.0	14.0	8.0	15.0	19.8	600	0.8	FY235K333E312EL5
350	1500	0.039	18.0	14.5	8.5	15.0	23.4	600	0.8	FY235K393E342EL5
350	1500	0.039	18.0	16.0	10.0	15.0	23.4	600	0.8	FY235K393E432EL5
350	1500	0.047	18.0	16.0	10.0	15.0	28.2	600	0.8	FY235K473E432EL5
350	1500	0.056	18.0	18.0	10.0	15.0	33.6	600	0.8	FY235K563E452EL5
350	1500	0.056	18.0	19.0	11.0	15.0	33.6	600	0.8	FY235K563E472EL5
350	1500	0.068	18.0	19.0	11.0	15.0	40.8	600	0.8	FY235K683E472EL5
350	1500	0.033	26.0	15.5	6.0	22.5	16.5	500	0.8	FY235K333F142FL5
350	1500	0.039	26.0	15.5	6.0	22.5	19.5	500	0.8	FY235K393F142FL5
350	1500	0.047	26.0	16.5	7.0	22.5	23.5	500	0.8	FY235K473F172FL5
350	1500	0.056	26.0	16.5	7.0	22.5	28.0	500	0.8	FY235K563F172FL5
350	1500	0.068	26.0	17.0	8.5	22.5	34.0	500	0.8	FY235K683F202FL5
350	1500	0.082	26.0	17.0	8.5	22.5	41.0	500	0.8	FY235K823F202FL5
350	1500	0.082	26.0	19.0	10.0	22.5	41.0	500	0.8	FY235K823F242FL5
350	1500	0.100	26.0	19.0	10.0	22.5	50.0	500	0.8	FY235K104F242FL5
350	1500	0.100	26.0	20.0	11.0	22.5	50.0	500	0.8	FY235K104F262FL5
350	1500	0.120	26.0	19.0	10.0	22.5	60.0	500	0.8	FY235K124F242FL5
350	1500	0.120	26.0	20.0	11.0	22.5	60.0	500	0.8	FY235K124F262FL5
350	1500	0.150	26.0	20.0	11.0	22.5	75.0	500	0.8	FY235K154F262FL5
350	1500	0.150	26.0	22.0	12.0	22.5	75.0	500	0.8	FY235K154F272FL5
350	1500	0.180	26.0	24.5	13.0	22.5	90.0	500	0.8	FY235K184F302FL5
350	1500	0.180	26.0	29.5	14.5	22.5	90.0	500	0.8	FY235K184F342FL5
350	1500	0.220	26.0	29.5	14.5	22.5	110.0	500	0.8	FY235K224F342FL5
350	1500	0.270	26.0	29.5	14.5	22.5	135.0	500	0.8	FY235K274F342FL5
350	1500	0.330	26.0	30.0	20.0	22.5	165.0	500	0.8	FY235K334F402FL5
350	1500	0.390	26.0	30.0	20.0	22.5	195.0	500	0.8	FY235K394F402FL5
350	1500	0.10	32.0	20.0	11.0	27.5	40.0	400	0.8	FY235K104G182GL5
350	1500	0.12	32.0	20.0	11.0	27.5	48.0	400	0.8	FY235K124G182GL5
350	1500	0.15	32.0	20.0	11.0	27.5	60.0	400	0.8	FY235K154G182GL5
350	1500	0.15	32.0	22.0	13.0	27.5	60.0	400	0.8	FY235K154G212GL5
350	1500	0.18	32.0	22.0	13.0	27.5	72.0	400	0.8	FY235K184G212GL5
350	1500	0.22	32.0	24.5	13.0	27.5	88.0	400	0.8	FY235K224G222GL5
350	1500	0.27	32.0	24.5	15.0	27.5	108.0	400	0.8	FY235K274G272GL5
350	1500	0.33	32.0	32.0	16.0	27.5	132.0	400	0.8	FY235K334G502GL5
350	1500	0.33	32.0	28.0	18.0	27.5	132.0	400	0.8	FY235K334G332GL5

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# Metallized Polypropylene Film Capacitor (Interference Suppressor Class Y2) AC Applications

## FY2 series

### ■ Technical data

Vac	Vdc	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm				
350	1500	0.39	32.0	32.0	16.0	27.5	156.0	400	0.8	FY235K394G502GL5
350	1500	0.39	32.0	28.0	18.0	27.5	156.0	400	0.8	FY235K394G332GL5
350	1500	0.47	32.0	32.0	16.0	27.5	188.0	400	0.8	FY235K474G502GL5
350	1500	0.47	32.0	33.0	18.0	27.5	188.0	400	0.8	FY235K474G342GL5
350	1500	0.56	32.0	31.0	21.0	27.5	224.0	400	0.8	FY235K564G372GL5
350	1500	0.68	32.0	37.0	22.0	27.5	272.0	400	0.8	FY235K684G402GL5
350	1500	0.82	32.0	48.0	22.0	27.5	328.0	400	0.8	FY235K824G512GL5
350	1500	1.0	32.0	48.0	22.0	27.5	400.0	400	0.8	FY235K105G512GL5
350	1500	0.27	42.5	22.0	12.0	37.5	81.0	300	1.0	FY235K274K102KL5
350	1500	0.33	42.5	24.0	15.0	37.5	99.0	300	1.0	FY235K334K122KL5
350	1500	0.39	42.5	24.0	15.0	37.5	117.0	300	1.0	FY235K394K122KL5
350	1500	0.47	42.5	30.0	16.0	37.5	141.0	300	1.0	FY235K474K142KL5
350	1500	0.56	42.5	30.0	16.0	37.5	168.0	300	1.0	FY235K564K142KL5
350	1500	0.68	42.5	32.0	19.0	37.5	204.0	300	1.0	FY235K684K212KL5
350	1500	0.82	42.5	32.0	19.0	37.5	246.0	300	1.0	FY235K824K212KL5
350	1500	0.82	42.5	40.0	20.0	37.5	246.0	300	1.0	FY235K824K242KL5
350	1500	1.0	42.5	40.0	20.0	37.5	300.0	300	1.0	FY235K105K242KL5
350	1500	1.2	42.5	45.0	30.0	37.5	360.0	300	1.0	FY235K125K422KL5

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# Metallized Polypropylene Film Capacitor (Radial Lead) Snubber Applications

## FSA series

### Overview

The FSA series is constructed of metallized polypropylene film and double sided metallized film, rectangular plastic box filled with resin and 2 or 4 tinned copper wires.



### Typical Applications

- Use in high voltage, high frequency circuit
- IGBT modules protection

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

### Specifications

Items	Characteristics
Application	Snubber IGBT
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Rated Voltage	850Vdc ~ 2000Vdc
Capacitance Range	0.033μF ~ 5.0μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0kVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtgδ):≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C ±2°C Relative humidity(RH) :85% ±2%
	Loading Voltage: Rated voltage (DC)
	Test duration : 1000 hours Capacitance change : ≤±5%

# Metallized Polypropylene Film Capacitor (Radial Lead) Snubber Applications

## FSA series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 100KHz 70°C	Peak Current A	ESR <sub>Typical</sub> 100KHZ mΩ	ESL nH	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm							
850	0.15	32.0	20.0	11.0	27.5	\	8.0	195.0	14.5	24	1300	0.8	FSA2PK154G182GL5
850	0.22	32.0	22.0	13.0	27.5	\	10.0	286.0	10.5	24	1300	0.8	FSA2PK224G212GL5
850	0.33	32.0	28.0	14.0	27.5	\	13.0	429.0	7.6	26	1300	0.8	FSA2PK334G262GL5
850	0.47	32.0	33.0	18.0	27.5	\	14.0	611.0	5.8	26	1300	0.8	FSA2PK474G342GL5
850	0.68	32.0	37.0	22.0	27.5	\	16.0	884.0	4.6	28	1300	0.8	FSA2PK684G402GL5
850	1.0	42.5	40.0	20.0	37.5	10.2	22.0	800.0	5.9	30	800	1.2	FSA2PK105K244KB5
850	2.0	42.5	44.0	24.0	37.5	10.2	29.0	1600.0	3.9	30	800	1.2	FSA2PK205K324KB5
850	3.0	57.5	45.0	30.0	52.5	20.3	29.0	1500.0	5.0	35	500	1.2	FSA2PK305M164MD5
850	4.0	57.5	45.0	30.0	52.5	20.3	29.0	2000.0	4.2	35	500	1.2	FSA2PK405M164MD5
850	5.0	57.5	50.0	35.0	52.5	20.3	29.0	2500.0	3.9	35	500	1.2	FSA2PK505M204MD5
1000	0.15	32.0	20.0	11.0	27.5	\	8.0	210.0	14.0	24	1400	0.8	FSA3KK154G182GL5
1000	0.22	32.0	22.0	13.0	27.5	\	9.0	308.0	9.9	24	1400	0.8	FSA3KK224G212GL5
1000	0.33	32.0	28.0	14.0	27.5	\	10.0	462.0	7.2	26	1400	0.8	FSA3KK334G262GL5
1000	0.47	32.0	33.0	18.0	27.5	\	12.0	658.0	5.6	26	1400	0.8	FSA3KK474G342GL5
1000	0.68	32.0	37.0	22.0	27.5	\	14.0	952.0	4.4	28	1400	0.8	FSA3KK684G402GL5
1000	1.0	42.5	40.0	20.0	37.5	10.2	16.0	900.0	5.5	30	900	1.2	FSA3KK105K244KB5
1000	1.5	42.5	37.0	28.0	37.5	10.2	16.0	1350.0	4.2	30	900	1.2	FSA3KK155K374KB5
1000	2.0	42.5	45.0	30.0	37.5	20.3	18.0	1800.0	3.7	30	900	1.2	FSA3KK205K424KD5
1000	2.2	42.5	45.0	30.0	37.5	20.3	18.0	1980.0	3.6	30	900	1.2	FSA3KK225K424KD5
1000	3.0	57.5	45.0	30.0	52.5	20.3	20.0	1650.0	4.7	35	550	1.2	FSA3KK305M164MD5
1000	4.0	57.5	50.0	35.0	52.5	20.3	22.0	2200.0	4.2	35	550	1.2	FSA3KK405M204MD5
1000	4.7	57.5	50.0	35.0	52.5	20.3	24.0	2585.0	3.9	35	550	1.2	FSA3KK475M204MD5
1200	0.10	32.0	20.0	11.0	27.5	\	7.0	160.0	18.5	24	1600	0.8	FSA3BK104G182GL5
1200	0.15	32.0	22.0	13.0	27.5	\	10.0	240.0	12.8	24	1600	0.8	FSA3BK154G212GL5
1200	0.22	32.0	28.0	14.0	27.5	\	12.0	352.0	9.2	26	1600	0.8	FSA3BK224G262GL5
1200	0.33	32.0	33.0	18.0	27.5	\	14.0	528.0	6.7	26	1600	0.8	FSA3BK334G342GL5
1200	0.47	32.0	37.0	22.0	27.5	\	14.0	752.0	5.3	28	1600	0.8	FSA3BK474G402GL5
1200	0.68	42.5	40.0	20.0	37.5	10.2	16.0	680.0	6.6	30	1000	1.2	FSA3BK684K244KB5
1200	1.0	42.5	40.0	20.0	37.5	10.2	18.0	1000.0	5.1	30	1000	1.2	FSA3BK105K244KB5
1200	1.2	42.5	37.0	28.0	37.5	10.2	18.0	1200.0	4.4	30	1000	1.2	FSA3BK125K374KB5
1200	2.0	57.5	45.0	30.0	52.5	20.3	20.0	1200.0	5.5	35	600	1.2	FSA3BK205M164MD5
1200	2.2	57.5	45.0	30.0	52.5	20.3	20.0	1320.0	5.2	35	600	1.2	FSA3BK225M164MD5
1200	2.5	57.5	45.0	30.0	52.5	20.3	22.0	1500.0	4.8	35	600	1.2	FSA3BK255M164MD5
1200	3.0	57.5	50.0	35.0	52.5	20.3	22.0	1800.0	4.5	35	600	1.2	FSA3BK305M204MD5
1200	3.3	57.5	50.0	35.0	52.5	20.3	24.0	1980.0	4.1	35	600	1.2	FSA3BK335M204MD5
1600	0.10	32.0	22.0	13.0	27.5	\	8.0	190.0	13.5	24	1900	0.8	FSA3WK104G212GL5
1600	0.15	32.0	24.5	13.0	27.5	\	9.0	285.0	10.5	24	1900	0.8	FSA3WK154G222GL5
1600	0.18	32.0	28.0	14.0	27.5	\	10.0	342.0	9.5	26	1900	0.8	FSA3WK184G262GL5
1600	0.22	32.0	33.0	18.0	27.5	\	12.0	418.0	8.0	26	1900	0.8	FSA3WK224G342GL5
1600	0.27	32.0	33.0	18.0	27.5	\	14.0	513.0	7.0	26	1900	0.8	FSA3WK274G342GL5
1600	0.33	32.0	37.0	22.0	27.5	\	15.0	627.0	6.8	28	1900	0.8	FSA3WK334G402GL5
1600	0.39	32.0	37.0	22.0	27.5	\	15.0	741.0	6.5	28	1900	0.8	FSA3WK394G402GL5
1600	0.47	42.5	32.0	19.0	37.5	\	16.0	587.5	6.0	30	1250	1.0	FSA3WK474K212KL5
1600	0.68	42.5	40.0	20.0	37.5	10.2	18.0	850.0	5.0	30	1250	1.2	FSA3WK684K244KB5
1600	0.82	42.5	44.0	24.0	37.5	10.2	18.0	1025.0	5.0	30	1250	1.2	FSA3WK824K324KB5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead) Snubber Applications

## FSA series

### ■ Technical data

Vdc	Cap Value μF	Dimensions					Irms 100KHz 70°C	Peak Current A	ESR <sub>Typical</sub> 100KHZ mΩ	ESL nH	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1							
		mm	mm	mm	mm	mm							
1600	1.0	42.5	45.0	30.0	37.5	20.3	19.0	1250.0	4.8	30	1250	1.2	FSA3WK105K424KD5
1600	1.2	42.5	45.0	30.0	37.5	20.3	19.0	1500.0	4.8	30	1250	1.2	FSA3WK125K424KD5
1600	1.5	57.5	45.0	30.0	52.5	20.3	20.0	1125.0	4.5	35	750	1.2	FSA3WK155M164MD5
1600	2.0	57.5	50.0	35.0	52.5	20.3	22.0	1500.0	4.2	35	750	1.2	FSA3WK205M204MD5
2000	0.033	32.0	20.0	11.0	27.5	\	5.0	75.9	42.5	24	2300	0.8	FSA3DK333G182GL5
2000	0.047	32.0	20.0	11.0	27.5	\	6.0	108.1	30.5	24	2300	0.8	FSA3DK473G182GL5
2000	0.068	32.0	22.0	13.0	27.5	\	8.0	156.4	20.8	24	2300	0.8	FSA3DK683G212GL5
2000	0.10	32.0	28.0	14.0	27.5	\	10.0	230.0	15.2	26	2300	0.8	FSA3DK104G262GL5
2000	0.15	32.0	33.0	18.0	27.5	\	15.0	345.0	10.8	26	2300	0.8	FSA3DK154G342GL5
2000	0.22	32.0	33.0	18.0	27.5	\	17.0	506.0	7.8	26	2300	0.8	FSA3DK224G342GL5
2000	0.33	42.5	40.0	20.0	37.5	10.2	16.0	462.0	9.4	30	1400	1.2	FSA3DK334K244KB5
2000	0.47	42.5	44.0	24.0	37.5	10.2	18.0	658.0	8.3	30	1400	1.2	FSA3DK474K324KB5
2000	0.68	42.5	45.0	30.0	37.5	20.3	20.0	952.0	5.5	30	1400	1.2	FSA3DK684K424KD5
2000	1.0	57.5	45.0	30.0	52.5	20.3	22.0	850.0	7.3	35	850	1.2	FSA3DK105M164MD5
2000	1.5	57.5	50.0	35.0	52.5	20.3	24.0	1275.0	5.6	35	850	1.2	FSA3DK155M204MD5

\* Customized products are available by request, contact us for more details.

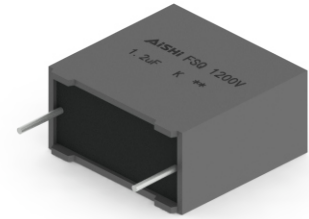
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade Snubber Capacitor

## FSQ series

### Overview

The FSQ series is constructed of metallized polypropylene film and double sided metallized film, rectangular plastic box filled with resin and 2 or 4 tinned copper wires. These FSQ series qualified in accordance to AEC-Q200 requirement.



### Typical Applications

- Use in high voltage, high frequency circuit
- IGBT modules protection

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Automotive Grade (AEC-Q200)

### Specifications

Items	Characteristics
Application	IGBT Modules Protection
Reference Standard	IEC 61071, AEC-Q200D
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Rated Voltage	850Vdc ~ 2000Vdc
Capacitance Range	0.033μF ~ 5.0μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0kVac 50 Hz for 10 sec at +25°C
Insulation Resistance	IR x C ≥ 50,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C    Relative humidity (RH) :93% ±2% Test duration: 56 days Capacitance change: ≤5%    DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +85°C±2°C    Voltage applied: 1.3 X VR (d.c.) Test duration: 1000 hours Capacitance change: ≤5%    DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C±2°C    Relative humidity (RH) :85% ±2% Loading Voltage: Rate voltage (DC); Test duration: 1000 hours Capacitance change: ≤5%

# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade Snubber Capacitor

## FSQ series

### Technical data

Vdc	Cap Value μF	Dimensions					P1 mm	Irms 100KHz 70°C A	Peak Current A	ESR <sub>Typical</sub> 100KHZ mΩ	ESL nH	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P									
		mm	mm	mm	mm	mm								
850	0.15	32.0	20.0	11.0	27.5	\	8.0	195.0	14.5	24	1300	0.8	FSQ2PK154G182GL5	
850	0.22	32.0	22.0	13.0	27.5	\	10.0	286.0	10.5	24	1300	0.8	FSQ2PK224G212GL5	
850	0.33	32.0	28.0	14.0	27.5	\	13.0	429.0	7.6	26	1300	0.8	FSQ2PK334G262GL5	
850	0.47	32.0	33.0	18.0	27.5	\	14.0	611.0	5.8	26	1300	0.8	FSQ2PK474G342GL5	
850	0.68	32.0	37.0	22.0	27.5	\	16.0	884.0	4.6	28	1300	0.8	FSQ2PK684G402GL5	
850	1.0	42.5	40.0	20.0	37.5	10.2	22.0	800.0	5.9	30	800	1.2	FSQ2PK105K244KB5	
850	2.0	42.5	44.0	24.0	37.5	10.2	29.0	1600.0	3.9	30	800	1.2	FSQ2PK205K324KB5	
850	3.0	57.5	45.0	30.0	52.5	20.3	29.0	1500.0	5.0	35	500	1.2	FSQ2PK305M164MD5	
850	4.0	57.5	45.0	30.0	52.5	20.3	29.0	2000.0	4.2	35	500	1.2	FSQ2PK405M164MD5	
850	5.0	57.5	50.0	35.0	52.5	20.3	29.0	2500.0	3.9	35	500	1.2	FSQ2PK505M204MD5	
1000	0.15	32.0	20.0	11.0	27.5	\	8.0	210.0	14.0	24	1400	0.8	FSQ3KK154G182GL5	
1000	0.22	32.0	22.0	13.0	27.5	\	9.0	308.0	9.9	24	1400	0.8	FSQ3KK224G212GL5	
1000	0.33	32.0	28.0	14.0	27.5	\	10.0	462.0	7.2	26	1400	0.8	FSQ3KK334G262GL5	
1000	0.47	32.0	33.0	18.0	27.5	\	12.0	658.0	5.6	26	1400	0.8	FSQ3KK474G342GL5	
1000	0.68	32.0	37.0	22.0	27.5	\	14.0	952.0	4.4	28	1400	0.8	FSQ3KK684G402GL5	
1000	1.0	42.5	40.0	20.0	37.5	10.2	16.0	900.0	5.5	30	900	1.2	FSQ3KK105K244KB5	
1000	1.5	42.5	37.0	28.0	37.5	10.2	16.0	1350.0	4.2	30	900	1.2	FSQ3KK155K374KB5	
1000	2.0	42.5	45.0	30.0	37.5	20.3	18.0	1800.0	3.7	30	900	1.2	FSQ3KK205K424KD5	
1000	2.2	42.5	45.0	30.0	37.5	20.3	18.0	1980.0	3.6	30	900	1.2	FSQ3KK225K424KD5	
1000	3.0	57.5	45.0	30.0	52.5	20.3	20.0	1650.0	4.7	35	550	1.2	FSQ3KK305M164MD5	
1000	4.0	57.5	50.0	35.0	52.5	20.3	22.0	2200.0	4.2	35	550	1.2	FSQ3KK405M204MD5	
1000	4.7	57.5	50.0	35.0	52.5	20.3	24.0	2585.0	3.9	35	550	1.2	FSQ3KK475M204MD5	
1200	0.10	32.0	20.0	11.0	27.5	\	7.0	160.0	18.5	24	1600	0.8	FSQ3BK104G182GL5	
1200	0.15	32.0	22.0	13.0	27.5	\	10.0	240.0	12.8	24	1600	0.8	FSQ3BK154G212GL5	
1200	0.22	32.0	28.0	14.0	27.5	\	12.0	352.0	9.2	26	1600	0.8	FSQ3BK224G262GL5	
1200	0.33	32.0	33.0	18.0	27.5	\	14.0	528.0	6.7	26	1600	0.8	FSQ3BK334G342GL5	
1200	0.47	32.0	37.0	22.0	27.5	\	14.0	752.0	5.3	28	1600	0.8	FSQ3BK474G402GL5	
1200	0.68	42.5	40.0	20.0	37.5	10.2	16.0	680.0	6.6	30	1000	1.2	FSQ3BK684K244KB5	
1200	1.0	42.5	40.0	20.0	37.5	10.2	18.0	1000.0	5.1	30	1000	1.2	FSQ3BK105K244KB5	
1200	1.2	42.5	37.0	28.0	37.5	10.2	18.0	1200.0	4.4	30	1000	1.2	FSQ3BK125K374KB5	
1200	2.0	57.5	45.0	30.0	52.5	20.3	20.0	1200.0	5.5	35	600	1.2	FSQ3BK205M164MD5	
1200	2.2	57.5	45.0	30.0	52.5	20.3	20.0	1320.0	5.2	35	600	1.2	FSQ3BK225M164MD5	
1200	2.5	57.5	45.0	30.0	52.5	20.3	22.0	1500.0	4.8	35	600	1.2	FSQ3BK255M164MD5	
1200	3.0	57.5	50.0	35.0	52.5	20.3	22.0	1800.0	4.5	35	600	1.2	FSQ3BK305M204MD5	
1200	3.3	57.5	50.0	35.0	52.5	20.3	24.0	1980.0	4.1	35	600	1.2	FSQ3BK335M204MD5	
1600	0.10	32.0	22.0	13.0	27.5	\	8.0	190.0	13.5	24	1900	0.8	FSQ3WK104G212GL5	
1600	0.15	32.0	24.5	13.0	27.5	\	9.0	285.0	10.5	24	1900	0.8	FSQ3WK154G222GL5	
1600	0.18	32.0	28.0	14.0	27.5	\	10.0	342.0	9.5	26	1900	0.8	FSQ3WK184G262GL5	
1600	0.22	32.0	33.0	18.0	27.5	\	12.0	418.0	8.0	26	1900	0.8	FSQ3WK224G342GL5	
1600	0.27	32.0	33.0	18.0	27.5	\	14.0	513.0	7.0	26	1900	0.8	FSQ3WK274G342GL5	
1600	0.33	32.0	37.0	22.0	27.5	\	15.0	627.0	6.8	28	1900	0.8	FSQ3WK334G402GL5	
1600	0.39	32.0	37.0	22.0	27.5	\	15.0	741.0	6.5	28	1900	0.8	FSQ3WK394G402GL5	
1600	0.47	42.5	32.0	19.0	37.5	\	16.0	587.5	6.0	30	1250	1.0	FSQ3WK474K212KL5	
1600	0.68	42.5	40.0	20.0	37.5	10.2	18.0	850.0	5.0	30	1250	1.2	FSQ3WK684K244KB5	
1600	0.82	42.5	44.0	24.0	37.5	10.2	18.0	1025.0	5.0	30	1250	1.2	FSQ3WK824K324KB5	

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\* Specification are subject to change, please refer to approved data sheets.



## Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade Snubber Capacitor

### FSQ series

#### ■ Technical data

Vdc	Cap Value μF	Dimensions					I <sub>rms</sub> 100KHz 70°C	Peak Current A	ESR <sub>Typical</sub> 100KHZ mΩ	ESL nH	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1							
		mm	mm	mm	mm	mm							
1600	1.0	42.5	45.0	30.0	37.5	20.3	19.0	1250.0	4.8	30	1250	1.2	FSQ3WK105K424KD5
1600	1.2	42.5	45.0	30.0	37.5	20.3	19.0	1500.0	4.8	30	1250	1.2	FSQ3WK125K424KD5
1600	1.5	57.5	45.0	30.0	52.5	20.3	20.0	1125.0	4.5	35	750	1.2	FSQ3WK155M164MD5
1600	2.0	57.5	50.0	35.0	52.5	20.3	22.0	1500.0	4.2	35	750	1.2	FSQ3WK205M204MD5
2000	0.033	32.0	20.0	11.0	27.5	\	5.0	75.9	42.5	24	2300	0.8	FSQ3DK333G182GL5
2000	0.047	32.0	20.0	11.0	27.5	\	6.0	108.1	30.5	24	2300	0.8	FSQ3DK473G182GL5
2000	0.068	32.0	22.0	13.0	27.5	\	8.0	156.4	20.8	24	2300	0.8	FSQ3DK683G212GL5
2000	0.10	32.0	28.0	14.0	27.5	\	10.0	230.0	15.2	26	2300	0.8	FSQ3DK104G262GL5
2000	0.15	32.0	33.0	18.0	27.5	\	15.0	345.0	10.8	26	2300	0.8	FSQ3DK154G342GL5
2000	0.22	32.0	33.0	18.0	27.5	\	17.0	506.0	7.8	26	2300	0.8	FSQ3DK224G342GL5
2000	0.33	42.5	40.0	20.0	37.5	10.2	16.0	462.0	9.4	30	1400	1.2	FSQ3DK334K244KB5
2000	0.47	42.5	44.0	24.0	37.5	10.2	18.0	658.0	8.3	30	1400	1.2	FSQ3DK474K324KB5
2000	0.68	42.5	45.0	30.0	37.5	20.3	20.0	952.0	5.5	30	1400	1.2	FSQ3DK684K424KD5
2000	1.0	57.5	45.0	30.0	52.5	20.3	22.0	850.0	7.3	35	850	1.2	FSQ3DK105M164MD5
2000	1.5	57.5	50.0	35.0	52.5	20.3	24.0	1275.0	5.6	35	850	1.2	FSQ3DK155M204MD5

\* Customized products are available by request, contact us for more details.

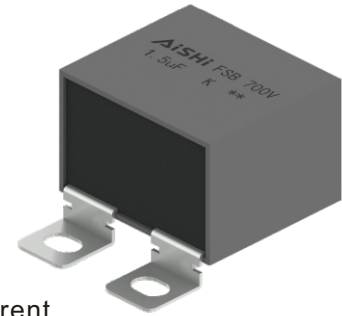
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Lug Terminal) Snubber Applications

## FSB series

### Overview

The FSB series is constructed of metallized polypropylene film and double sided metallized film, rectangular plastic box filled with resin and lug terminal.



### Typical Applications

- Use in high voltage, high frequency circuit
- IGBT modules protection

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

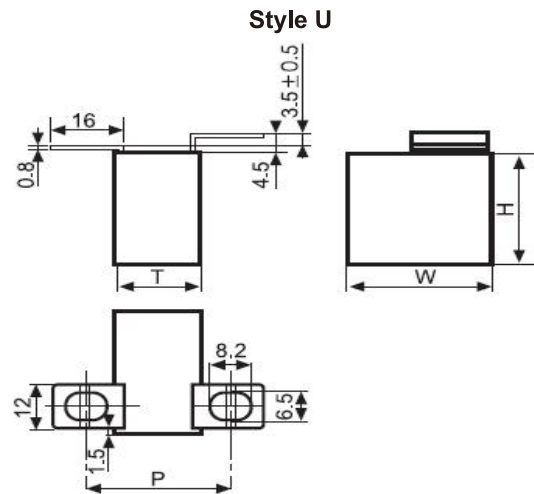
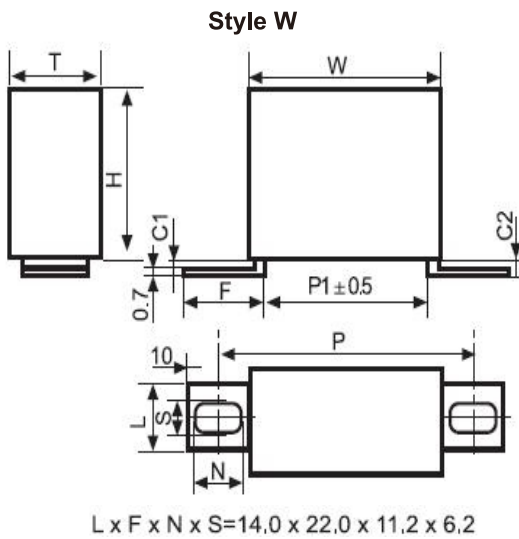
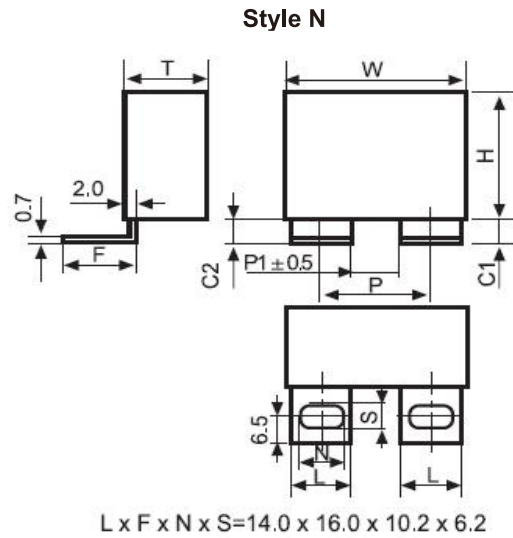
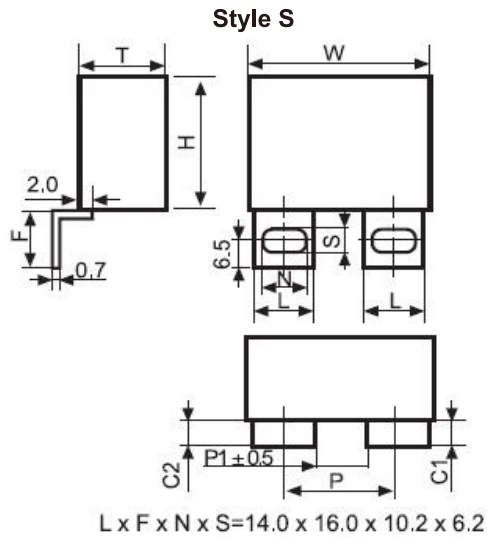
### Specifications

Items	Characteristics
Application	Snubber IGBT
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40°C ~ 105°C
Rated Voltage	850Vdc ~ 2000Vdc
Capacitance Range	0.1µF ~ 4.0µF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+ 85°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned brass lugs
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2% Test duration : 56 days Capacitance change : ≤ ±5% DF change (Δtgδ): ≤ 20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +85°C ±2°C Voltage applied: 1.3 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change : ≤ ±5% DF change (Δtgδ): ≤ 20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C ±2°C Relative humidity(RH) :85% ±2% Loading Voltage: Rated voltage (DC) Test duration : 1000 hours Capacitance change : ≤ ±5%

# Metallized Polypropylene Film Capacitor (Lug Terminal) Snubber Applications

## FSB series

### Outline Drawing



### Dimensions - Case

Unit: mm

Case Code	W	H	T	Output
	±1.0	±1.0	±1.0	±0.2
N++	42.5	45.0	30.0	M6/M8
N++	42.5	40.0	20.0	M6/M8
N++	42.5	35.5	33.5	M6/M8
N++	42.5	37.0	28.0	M6/M8
N++	42.5	44.0	24.0	M6/M8
P++	57.5	45.0	30.0	M6/M8
P++	57.5	50.0	35.0	M6/M8

\* Customized products are available by request, contact us for more details.  
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Lug Terminal) Snubber Applications

## FSB series

### Technical data

Vdc	Cap Value μF	Dimensions			Irms	Peak	ESR <sub>Typical</sub>	ESL	dv/dt V/us	Style	Part Number
		W mm	H mm	T mm	100KHz@70°C	Current	100KHz@70°C				
					A	A	mΩ				
850	0.47	42.5	40.0	20.0	14.0	357.0	9.4	40	760	S	FSB2PK474N11SN6G
850	0.68	42.5	40.0	20.0	17.0	517.0	6.6	40	760	S	FSB2PK684N11SN6G
850	1.0	42.5	40.0	20.0	20.0	760.0	4.6	40	760	S	FSB2PK105N11SN6G
850	1.5	42.5	37.0	28.0	27.0	1140.0	3.1	36	760	S	FSB2PK155N15SN6G
850	1.5	42.5	35.5	33.5	28.0	1140.0	3.0	36	760	S	FSB2PK155N21SN6G
850	2.0	42.5	45.0	30.0	34.0	1520.0	2.4	43	760	S	FSB2PK205N18SN6G
850	2.2	42.5	45.0	30.0	35.0	1672.0	2.2	43	760	S	FSB2PK225N18SN6G
850	2.5	57.5	45.0	30.0	37.0	1175.0	2.0	45	470	S	FSB2PK255P13SN6L
850	3.0	57.5	45.0	30.0	30.0	1410.0	3.5	45	470	S	FSB2PK305P13SN6L
850	3.3	57.5	45.0	30.0	31.0	1551.0	3.2	45	470	S	FSB2PK335P13SN6L
850	4.0	57.5	50.0	35.0	34.0	1880.0	2.6	48	470	S	FSB2PK405P17SN6L
850	5.0	57.5	50.0	35.0	40.0	2350.0	2.2	48	470	S	FSB2PK505P17SN6L
1000	0.47	42.5	40.0	20.0	14.0	400.0	8.7	40	850	S	FSB3KK474N11SN6G
1000	0.68	42.5	40.0	20.0	18.0	578.0	6.1	40	850	S	FSB3KK684N11SN6G
1000	1.0	42.5	40.0	20.0	20.0	850.0	4.3	40	850	S	FSB3KK105N11SN6G
1000	1.5	42.5	37.0	28.0	28.0	1275.0	2.9	36	850	S	FSB3KK155N15SN6G
1000	1.5	42.5	35.5	33.5	29.0	1275.0	2.8	36	850	S	FSB3KK155N21SN6G
1000	2.0	42.5	45.0	30.0	35.0	1700.0	2.3	43	850	S	FSB3KK205N18SN6G
1000	2.2	57.5	45.0	30.0	28.0	1166.0	4.4	45	530	S	FSB3KK225P13SN6L
1000	2.5	57.5	45.0	30.0	29.0	1325.0	3.8	45	530	S	FSB3KK255P13SN6L
1000	3.0	57.5	45.0	30.0	31.0	1590.0	3.2	45	530	S	FSB3KK305P13SN6L
1000	3.3	57.5	45.0	30.0	32.0	1749.0	3.0	45	530	S	FSB3KK335P13SN6L
1000	4.0	57.5	50.0	35.0	38.0	2120.0	2.5	48	530	S	FSB3KK405P17SN6L
1200	0.33	42.5	40.0	20.0	13.0	330.0	10.9	40	1000	S	FSB3BK334N11SN6G
1200	0.47	42.5	40.0	20.0	16.0	470.0	7.7	40	1000	S	FSB3BK474N11SN6G
1200	0.68	42.5	40.0	20.0	19.0	680.0	5.4	40	1000	S	FSB3BK684N11SN6G
1200	1.0	42.5	37.0	28.0	25.0	1000.0	3.8	36	1000	S	FSB3BK105N15SN6G
1200	1.2	42.5	37.0	28.0	27.0	1200.0	3.2	36	1000	S	FSB3BK125N15SN6G
1200	1.2	42.5	35.5	33.5	28.0	1200.0	3.0	36	1000	S	FSB3BK125N21SN6G
1200	1.5	42.5	45.0	30.0	32.0	1500.0	2.6	43	1000	S	FSB3BK155N18SN6G
1200	2.0	57.5	45.0	30.0	27.0	1200.0	4.1	45	600	S	FSB3BK205P13SN6L
1200	2.2	57.5	45.0	30.0	28.0	1320.0	3.8	45	600	S	FSB3BK225P13SN6L
1200	2.5	57.5	45.0	30.0	30.0	1500.0	3.3	45	600	S	FSB3BK255P13SN6L
1200	3.0	57.5	50.0	35.0	35.0	1800.0	2.9	48	600	S	FSB3BK305P17SN6L
1200	3.3	57.5	50.0	35.0	38.0	1980.0	2.6	48	600	S	FSB3BK335P17SN6L
2000	0.10	42.5	40.0	20.0	8.0	140.0	26.8	40	1400	S	FSB3DK104N11SN6G
2000	0.15	42.5	40.0	20.0	10.0	210.0	17.9	40	1400	S	FSB3DK154N11SN6G
2000	0.22	42.5	40.0	20.0	12.0	308.0	12.3	40	1400	S	FSB3DK224N11SN6G
2000	0.33	42.5	40.0	20.0	16.0	462.0	8.3	40	1400	S	FSB3DK334N11SN6G
2000	0.47	42.5	40.0	20.0	19.0	658.0	5.9	40	1400	S	FSB3DK474N11SN6G
2000	0.68	42.5	44.0	24.0	24.0	952.0	4.1	43	1400	S	FSB3DK684N13SN6G
2000	0.68	42.5	35.5	33.5	25.0	952.0	4.0	43	1400	S	FSB3DK684N21SN6G
2000	0.82	42.5	45.0	30.0	28.0	1148.0	3.5	43	1400	S	FSB3DK824N18SN6G
2000	1.0	57.5	45.0	30.0	23.0	900.0	5.9	45	900	S	FSB3DK105P13SN6L
2000	1.2	57.5	45.0	30.0	25.0	1080.0	4.9	45	900	S	FSB3DK125P13SN6L
2000	1.5	57.5	50.0	35.0	30.0	1350.0	4.0	48	900	S	FSB3DK155P17SN6L

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# Metallized Polypropylene Film Capacitor (Lug Terminal) Snubber Applications

## FSB series

### Technical data

Vdc	Cap Value μF	Dimensions			Irms 100KHz@70°C A	Peak Current A	ESR <sub>Typical</sub> 100KHz@70°C mΩ	ESL nH	dv/dt V/us	Style	Part Number
		W mm	H mm	T mm							
		850	0.47	42.5	40.0	20.0	14.0	357.0	9.4	40	760
850	0.68	42.5	40.0	20.0	17.0	517.0	6.6	40	760	N	FSB2PK684N11NN6G
850	1.0	42.5	40.0	20.0	20.0	760.0	4.6	40	760	N	FSB2PK105N11NN6G
850	1.5	42.5	37.0	28.0	27.0	1140.0	3.1	36	760	N	FSB2PK155N15NN6G
850	1.5	42.5	35.5	33.5	28.0	1140.0	3.0	36	760	N	FSB2PK155N21NN6G
850	2.0	42.5	45.0	30.0	34.0	1520.0	2.4	43	760	N	FSB2PK205N18NN6G
850	2.2	42.5	45.0	30.0	35.0	1672.0	2.2	43	760	N	FSB2PK225N18NN6G
850	2.5	57.5	45.0	30.0	37.0	1175.0	2.0	45	470	N	FSB2PK255P13NN6L
850	3.0	57.5	45.0	30.0	30.0	1410.0	3.5	45	470	N	FSB2PK305P13NN6L
850	3.3	57.5	45.0	30.0	31.0	1551.0	3.2	45	470	N	FSB2PK335P13NN6L
850	4.0	57.5	50.0	35.0	34.0	1880.0	2.6	48	470	N	FSB2PK405P17NN6L
850	5.0	57.5	50.0	35.0	40.0	2350.0	2.2	48	470	N	FSB2PK505P17NN6L
1000	0.47	42.5	40.0	20.0	14.0	400.0	8.7	40	850	N	FSB3KK474N11NN6G
1000	0.68	42.5	40.0	20.0	18.0	578.0	6.1	40	850	N	FSB3KK684N11NN6G
1000	1.0	42.5	40.0	20.0	20.0	850.0	4.3	40	850	N	FSB3KK105N11NN6G
1000	1.5	42.5	37.0	28.0	28.0	1275.0	2.9	36	850	N	FSB3KK155N15NN6G
1000	1.5	42.5	35.5	33.5	29.0	1275.0	2.8	36	850	N	FSB3KK155N21NN6G
1000	2.0	42.5	45.0	30.0	35.0	1700.0	2.3	43	850	N	FSB3KK205N18NN6G
1000	2.2	57.5	45.0	30.0	28.0	1166.0	4.4	45	530	N	FSB3KK225P13NN6L
1000	2.5	57.5	45.0	30.0	29.0	1325.0	3.8	45	530	N	FSB3KK255P13NN6L
1000	3.0	57.5	45.0	30.0	31.0	1590.0	3.2	45	530	N	FSB3KK305P13NN6L
1000	3.3	57.5	45.0	30.0	32.0	1749.0	3.0	45	530	N	FSB3KK335P13NN6L
1000	4.0	57.5	50.0	35.0	38.0	2120.0	2.5	48	530	N	FSB3KK405P17NN6L
1200	0.33	42.5	40.0	20.0	13.0	330.0	10.9	40	1000	N	FSB3BK334N11NN6G
1200	0.47	42.5	40.0	20.0	16.0	470.0	7.7	40	1000	N	FSB3BK474N11NN6G
1200	0.68	42.5	40.0	20.0	19.0	680.0	5.4	40	1000	N	FSB3BK684N11NN6G
1200	1.0	42.5	37.0	28.0	25.0	1000.0	3.8	36	1000	N	FSB3BK105N15NN6G
1200	1.2	42.5	37.0	28.0	27.0	1200.0	3.2	36	1000	N	FSB3BK125N15NN6G
1200	1.2	42.5	35.5	33.5	28.0	1200.0	3.0	36	1000	N	FSB3BK125N21NN6G
1200	1.5	42.5	45.0	30.0	32.0	1500.0	2.6	43	1000	N	FSB3BK155N18NN6G
1200	2.0	57.5	45.0	30.0	27.0	1200.0	4.1	45	600	N	FSB3BK205P13NN6L
1200	2.2	57.5	45.0	30.0	28.0	1320.0	3.8	45	600	N	FSB3BK225P13NN6L
1200	2.5	57.5	45.0	30.0	30.0	1500.0	3.3	45	600	N	FSB3BK255P13NN6L
1200	3.0	57.5	50.0	35.0	35.0	1800.0	2.9	48	600	N	FSB3BK305P17NN6L
1200	3.3	57.5	50.0	35.0	38.0	1980.0	2.6	48	600	N	FSB3BK335P17NN6L
2000	0.10	42.5	40.0	20.0	8.0	140.0	26.8	40	1400	N	FSB3DK104N11NN6G
2000	0.15	42.5	40.0	20.0	10.0	210.0	17.9	40	1400	N	FSB3DK154N11NN6G
2000	0.22	42.5	40.0	20.0	12.0	308.0	12.3	40	1400	N	FSB3DK224N11NN6G
2000	0.33	42.5	40.0	20.0	16.0	462.0	8.3	40	1400	N	FSB3DK334N11NN6G
2000	0.47	42.5	40.0	20.0	19.0	658.0	5.9	40	1400	N	FSB3DK474N11NN6G
2000	0.68	42.5	44.0	24.0	24.0	952.0	4.1	43	1400	N	FSB3DK684N13NN6G
2000	0.68	42.5	35.5	33.5	25.0	952.0	4.0	43	1400	N	FSB3DK684N21NN6G
2000	0.82	42.5	45.0	30.0	28.0	1148.0	3.5	43	1400	N	FSB3DK824N18NN6G
2000	1.0	57.5	45.0	30.0	23.0	900.0	5.9	45	900	N	FSB3DK105P13NN6L
2000	1.2	57.5	45.0	30.0	25.0	1080.0	4.9	45	900	N	FSB3DK125P13NN6L
2000	1.5	57.5	50.0	35.0	30.0	1350.0	4.0	48	900	N	FSB3DK155P17NN6L

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# Metallized Polypropylene Film Capacitor (Lug Terminal) Snubber Applications

## FSB series

### Performance Notes

Rs: Equivalent series resistance - Ohmic resistances (Ohm)

Dielectric Dissipation Factor:  $\tan\delta_0$  ( Polypropylene: 0.0002)

Ta: Ambient temperature

Rth: Thermal resistance °C / W, indicates hot spot temperature rise due to power dissipation losses

Pj: Joule losses  $P_j = R_s \cdot I_{rms}^2$

Pd: Dielectric losses

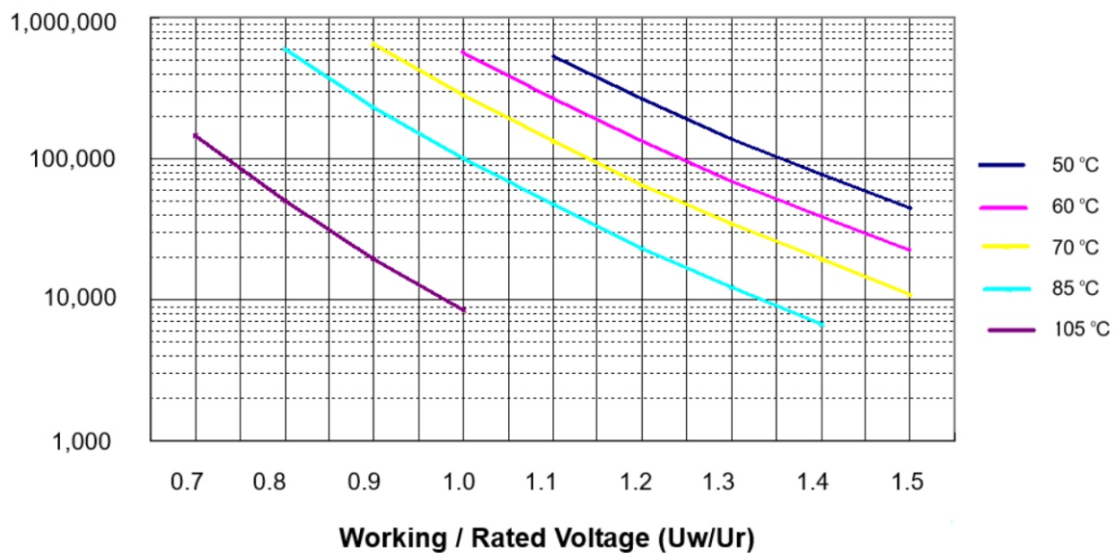
$$P_d = X_c \cdot I_{rms}^2 \cdot \tan\delta = I_{rms}^2 / (2 \cdot \pi \cdot f \cdot C) \cdot \tan\delta$$

T<sub>hs</sub>: Hot spot temperature within the capacitor

$$T_{hs} = T_a + (P_j + P_d) \cdot R_{th}$$

Design life: 100,000 hours at Un @ Hot-Spot temperature ≤ +85°C

### Expected Life Curve



### Cautions and Warnings

- Do not exceed the upper category temperature.
- For long time storage, maximum relative humidity 80%, no dew allowed on the capacitor.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments. Regular maintenance and cleaning especially of the terminals is required to avoid conductive path between terminals / or terminal and ground.
- Do not apply any mechanical stress to the capacitor terminals, and avoid any compressive, tensile or flexural stress.
- Do not move the capacitor after soldered to the PC board, and don't pick up the PC board by the soldered capacitor.
- Avoid overload of the capacitors.

# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSC series

### Overview

The FSC series is constructed of metallized polypropylene film and double sided metallized film, with polyester tape wrapping filled with resin and tinned copper wires.



### Typical Applications

- Use in high voltage, high frequency circuit
- IGBT modules protection

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

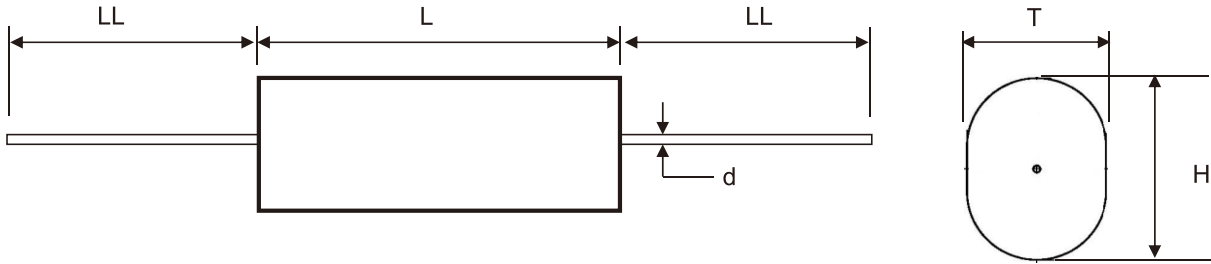
### Specifications

Items	Characteristics
Application	Snubber IGBT
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C(+85°C observing voltage must be de-rating at 1.35% per °C)
Rated Voltage	600Vdc ~ 3000Vdc
Capacitance Range	0.01μF ~ 4.7μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+ 85°C
Protection	Polyester wrapping with epoxy resin fill
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011 /65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtg δ) : ≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtg δ) : ≤20X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSC series

### ■ Dimensions



### ■ Dimensions - Lead wires

T	L	d	LL
(mm) max	(mm) max	(mm) $\pm 0.1$	(mm) min
11	22.0	0.8	35.0
9.5	28.0	0.8	35.0
10 ~ 13	34.0	0.8	35.0
13.5 ~ 20.5	34.0	1.0	35.0
18 ~ 22.5	44.0	1.0	35.0
23.5 ~ 33	44.0	1.2	35.0
15 ~ 27	48.0	1.0	35.0
28 ~ 35	58.0	1.2	35.0



# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSC series

### Technical data

Vdc	Cap Value μF	Dimensions			Irms 100KHz 70°C A	Peak Current A	ESR <sub>Typical</sub> 100KHz mΩ	ESL nH	dv/dt V/us	Lead Wire mm	Part Number
		L	H	T							
		mm max	mm max	mm max							
600	0.10	34.0	12.0	6.0	3.0	25.0	28.0	17	250	0.8	FSC2KK104034XNLB
600	0.15	34.0	13.0	7.0	4.5	37.5	13.0	18	250	0.8	FSC2KK154034XNLB
600	0.22	34.0	14.5	8.0	5.0	55.0	12.0	19	250	0.8	FSC2KK224034XNLB
600	0.33	34.0	16.0	10.0	6.0	82.5	9.0	19	250	0.8	FSC2KK334034XNLB
600	0.47	34.0	18.0	12.0	7.5	117.5	8.0	20	250	1.0	FSC2KK474034XNLB
600	0.68	34.0	20.5	14.5	9.0	170.0	6.0	21	250	1.0	FSC2KK684034XNLB
600	1.0	34.0	23.5	17.5	10.0	250.0	6.0	23	250	1.0	FSC2KK105034XNLB
600	1.5	34.0	27.5	21.5	12.0	375.0	5.0	24	250	1.2	FSC2KK155034XNLB
600	2.0	46.0	27.5	18.5	13.0	400.0	5.0	28	200	1.2	FSC2KK205046XNLB
600	3.3	54.0	32.0	22.5	17.5	495.0	4.0	34	150	1.2	FSC2KK335054XNLB
600	4.7	54.0	33.5	28.5	19.0	705.0	4.0	36	150	1.2	FSC2KK475054XNLB
850	0.15	34.0	16.0	10.0	6.5	112.5	8.0	19	750	0.8	FSC2PK154034XNLB
850	0.22	34.0	18.0	11.5	7.0	165.0	8.0	20	750	1.0	FSC2PK224034XNLB
850	0.33	34.0	20.5	14.5	8.5	247.5	7.0	21	750	1.0	FSC2PK334034XNLB
850	0.47	34.0	23.5	17.0	11.0	352.5	5.0	22	750	1.0	FSC2PK474034XNLB
850	0.68	34.0	27.0	21.0	13.5	510.0	4.0	24	750	1.2	FSC2PK684034XNLB
850	1.0	46.0	27.0	17.5	13.0	450.0	5.0	28	450	1.2	FSC2PK105046XNLB
850	1.5	46.0	31.0	21.5	16.0	675.0	4.0	30	450	1.2	FSC2PK155046XNLB
850	2.0	46.0	34.5	25.0	20.0	900.0	3.0	31	450	1.2	FSC2PK205046XNLB
850	2.2	46.0	36.0	26.5	20.5	990.0	3.0	32	450	1.2	FSC2PK225046XNLB
850	2.5	46.0	38.0	28.5	21.5	1,125.0	3.0	33	450	1.2	FSC2PK255046XNLB
1000	0.15	34.0	17.5	11.5	7.5	127.5	7.0	20	850	1.0	FSC3KK154034XNLB
1000	0.22	34.0	20.0	13.5	8.0	187.0	7.0	21	850	1.0	FSC3KK224034XNLB
1000	0.33	34.0	23.0	17.0	10.0	280.5	6.0	22	850	1.0	FSC3KK334034XNLB
1000	0.47	34.0	26.5	20.0	12.0	399.5	5.0	24	850	1.2	FSC3KK474034XNLB
1000	0.68	34.0	30.5	24.5	13.0	578.0	5.0	26	850	1.2	FSC3KK684034XNLB
1000	1.0	46.0	30.0	20.5	14.0	500.0	5.0	24	500	1.2	FSC3KK105046XNLB
1000	1.5	46.0	35.0	25.5	17.5	750.0	4.0	31	500	1.2	FSC3KK155046XNLB
1000	2.0	46.0	39.0	30.0	22.0	1,000.0	3.0	33	500	1.2	FSC3KK205046XNLB
1200	0.10	34.0	18.0	12.0	7.0	115.0	9.0	20	1,150	1.0	FSC3BK104034XNLB
1200	0.15	34.0	21.0	14.5	8.5	172.5	7.0	21	1,150	1.0	FSC3BK154034XNLB
1200	0.22	34.0	24.0	17.5	9.5	253.0	7.0	23	1,150	1.0	FSC3BK224034XNLB
1200	0.33	46.0	24.0	14.5	10.0	214.5	7.0	21	650	1.0	FSC3BK334046XNLB
1200	0.47	46.0	27.0	18.0	11.0	305.5	7.0	28	650	1.2	FSC3BK474046XNLB
1200	0.68	46.0	31.0	22.0	13.0	442.0	6.0	30	650	1.2	FSC3BK684046XNLB
1200	1.0	46.0	36.0	27.0	16.0	650.0	5.0	32	650	1.2	FSC3BK105046XNLB
1200	1.5	54.0	40.5	27.5	20.0	780.0	4.0	36	520	1.2	FSC3BK155054XNLB
1600	0.10	34.0	20.5	14.5	8.5	145.0	7.0	21	1,450	1.0	FSC3WK104034XNLB
1600	0.15	34.0	24.0	18.0	11.0	217.5	5.0	23	1,450	1.0	FSC3WK154034XNLB
1600	0.22	34.0	28.0	21.5	10.5	319.0	7.0	24	1,450	1.2	FSC3WK224034XNLB
1600	0.33	46.0	27.5	18.5	11.0	264.0	7.0	23	800	1.2	FSC3WK334046XNLB
1600	0.47	46.0	31.5	22.0	13.0	376.0	6.0	30	800	1.2	FSC3WK474046XNLB
1600	0.68	46.0	36.5	27.0	14.5	544.0	6.0	32	800	1.2	FSC3WK684046XNLB
1600	1.0	46.0	42.5	33.0	18.0	800.0	5.0	35	800	1.2	FSC3WK105046XNLB
1600	1.5	54.0	47.0	34.5	22.5	975.0	4.0	39	650	1.2	FSC3WK155054XNLB

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# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSC series

### Technical data

Vdc	Cap Value $\mu\text{F}$	Dimensions			Irms 100KHz 70°C A	Peak Current A	ESR <sub>Typical</sub> 100KHz m $\Omega$	ESL nH	dv/dt V/us	Lead Wire mm	Part Number
		L	H	T							
		mm max	mm max	mm max							
2000	0.022	34.0	14.5	8.0	3.0	38.5	35.0	18	1,750	0.8	FSC3DK223034XNLB
2000	0.033	34.0	16.0	10.0	4.0	57.8	20.0	19	1,750	0.8	FSC3DK333034XNLB
2000	0.047	34.0	18.0	11.5	6.0	82.3	12.0	20	1,750	1.0	FSC3DK473034XNLB
2000	0.068	34.0	20.5	14.0	8.0	119.0	8.0	21	1,750	1.0	FSC3DK683034XNLB
2000	0.10	34.0	23.5	17.0	9.0	175.0	7.0	22	1,750	1.0	FSC3DK104034XNLB
2000	0.15	46.0	23.5	14.0	10.0	144.0	7.0	21	960	1.0	FSC3DK154046XNLB
2000	0.22	46.0	27.0	17.5	10.5	211.2	8.0	28	960	1.0	FSC3DK224046XNLB
2000	0.33	46.0	31.5	22.0	11.5	316.8	8.0	30	960	1.2	FSC3DK334046XNLB
2000	0.47	46.0	36.0	26.5	14.5	451.2	6.0	32	960	1.2	FSC3DK474046XNLB
2000	0.56	54.0	36.5	24.0	14.0	425.6	7.0	31	760	1.2	FSC3DK564054XNLB
2000	0.68	54.0	39.5	27.0	16.0	516.8	6.0	35	760	1.2	FSC3DK684054XNLB
2000	1.0	54.0	45.5	33.0	19.5	760.0	5.0	38	760	1.2	FSC3DK105054XNLB
3000	0.010	34.0	14.0	8.0	2.5	26.0	60.0	18	2,600	0.8	FSC3FK103034XNLB
3000	0.015	34.0	16.0	9.5	3.0	39.0	40.0	19	2,600	0.8	FSC3FK153034XNLB
3000	0.022	34.0	18.0	11.5	4.0	57.2	25.0	20	2,600	1.0	FSC3FK223034XNLB
3000	0.033	34.0	20.5	14.5	6.0	85.8	14.0	21	2,600	1.0	FSC3FK333034XNLB
3000	0.047	46.0	21.0	11.5	6.5	70.5	14.0	20	1,500	1.0	FSC3FK473046XNLB
3000	0.068	46.0	23.5	14.0	7.5	102.0	12.0	26	1,500	1.0	FSC3FK683046XNLB
3000	0.10	46.0	26.5	17.0	9.0	150.0	10.0	28	1,500	1.2	FSC3FK104046XNLB
3000	0.15	46.0	31.0	21.5	11.5	225.0	8.0	30	1,500	1.2	FSC3FK154046XNLB

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSD series

### Overview

The FSD series is constructed of metallized polypropylene film and double sided metallized film, with polyester tape wrapping filled with resin and tinned copper wires.



### Typical Applications

- Use in high voltage, high frequency circuit
- IGBT modules protection

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

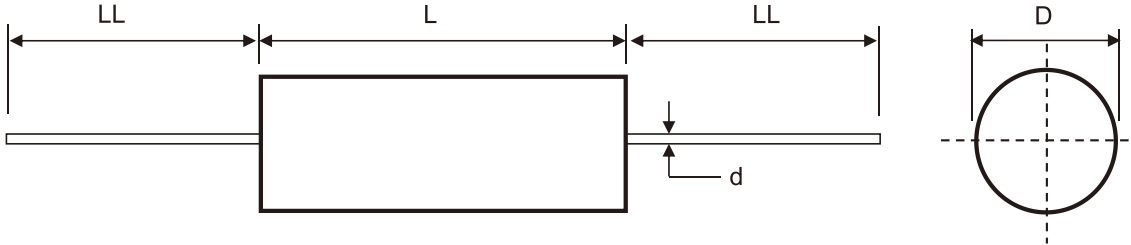
### Specifications

Items	Characteristics
Application	Snubber IGBT
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Rated Voltage	850Vdc ~ 2000Vdc
Capacitance Range	0.047μF ~ 4.7μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T = +85°C
Protection	Polyester wrapping with epoxy resin fill
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤ ±5% DF change (Δtgδ): ≤ 20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied: 1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤ ±5% DF change (Δtgδ): ≤ 20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit

# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSD series

### ■ Dimensions



### ■ Dimensions - Lead wires

D	L	d	LL
(mm) max	(mm) max	(mm) $\pm 0.1$	(mm) min
11	22.0	0.8	35.0
9.5	28.0	0.8	35.0
10 ~ 13	34.0	0.8	35.0
13.5 ~ 20.5	34.0	1.0	35.0
18 ~ 22.5	44.0	1.0	35.0
23.5 ~ 33	44.0	1.2	35.0
15 ~ 27	48.0	1.0	35.0
28 ~ 35	58.0	1.2	35.0

# Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

## FSD series

### Technical data

Vdc	Cap Value μF	Dimensions		Irms	Peak	ESR <sub>typical</sub>	ESL	dv/dt	Lead Wire	Part Number
		D	L	100KHz	Current	WOKHz				
				mm max	mm max	70°C A				
850	0.22	14.5	34.0	8.0	264.0	9.4	22	1200	1.0	FSD2PK224034XNLB
850	0.22	12.0	46.0	7.0	154.0	11.3	26	700	0.8	FSD2PK224046XNLB
850	0.33	17.5	34.0	9.0	396.0	8.8	22	1200	1.0	FSD2PK334034XNLB
850	0.33	14.0	46.0	10.0	231.0	8.7	26	700	1.0	FSD2PK334046XNLB
850	0.47	20.5	34.0	11.0	564.0	5.7	22	1200	1.0	FSD2PK474034XNLB
850	0.47	16.5	46.0	9.0	329.0	7.2	26	700	1.0	FSD2PK474046XNLB
850	0.68	19.5	46.0	13.0	476.0	4.6	26	700	1.0	FSD2PK684046XNLB
850	1.0	23.0	46.0	13.0	700.0	4.7	26	700	1.0	FSD2PK105046XNLB
850	1.5	28.5	46.0	13.0	1050.0	4.0	26	700	1.2	FSD2PK155046XNLB
850	2.0	32.0	46.0	13.0	1400.0	4.3	26	700	1.2	FSD2PK205046XNLB
850	2.2	33.5	46.0	14.0	1540.0	3.3	26	700	1.2	FSD2PK225046XNLB
850	2.2	28.5	58.0	12.0	990.0	4.0	32	450	1.2	FSD2PK225058XNLB
850	2.5	35.5	46.0	15.0	1750.0	3.7	26	700	1.2	FSD2PK255046XNLB
850	2.5	30.0	58.0	15.0	1125.0	4.0	32	450	1.2	FSD2PK255058XNLB
850	3.0	32.5	58.0	15.0	1350.0	3.7	32	450	1.2	FSD2PK305058XNLB
850	3.3	34.0	58.0	15.0	1485.0	3.3	32	450	1.2	FSD2PK335058XNLB
850	4.0	37.5	58.0	15.0	1800.0	3.3	32	450	1.2	FSD2PK405058XNLB
850	4.7	40.0	58.0	15.0	2115.0	2.9	32	450	1.2	FSD2PK475058XNLB
1000	0.22	16.5	34.0	8.0	286.0	8.5	22	1300	1.0	FSD3KK224034XNLB
1000	0.33	20.0	34.0	9.0	429.0	6.5	22	1300	1.0	FSD3KK334034XNLB
1000	0.33	16.0	46.0	8.0	264.0	8.3	26	800	1.0	FSD3KK334046XNLB
1000	0.47	23.5	34.0	10.0	611.0	5.4	22	1300	1.0	FSD3KK474034XNLB
1000	0.47	18.5	46.0	9.0	376.0	6.7	26	800	1.0	FSD3KK474046XNLB
1000	0.68	22.0	46.0	12.0	544.0	5.7	26	800	1.0	FSD3KK684046XNLB
1000	1.0	26.5	46.0	12.0	800.0	4.6	26	800	1.2	FSD3KK105046XNLB
1000	1.5	32.0	46.0	13.0	1200.0	5.2	26	800	1.2	FSD3KK155046XNLB
1000	1.5	27.0	58.0	12.0	750.0	5.6	32	500	1.2	FSD3KK155058XNLB
1000	2.0	31.0	58.0	15.0	1000.0	4.3	32	500	1.2	FSD3KK205058XNLB
1000	2.2	32.0	58.0	15.0	1100.0	3.9	32	500	1.2	FSD3KK225058XNLB
1000	3.0	37.5	58.0	15.0	1500.0	3.4	32	500	1.2	FSD3KK305058XNLB
1000	3.3	39.0	58.0	15.0	1650.0	3.1	32	500	1.2	FSD3KK335058XNLB
1200	0.22	18.0	34.0	9.0	330.0	7.7	22	1500	1.0	FSD3BK224034XNLB
1200	0.22	14.5	46.0	8.0	198.0	11.0	26	900	1.0	FSD3BK224046XNLB
1200	0.33	22.0	34.0	10.0	495.0	6.6	22	1500	1.0	FSD3BK334034XNLB
1200	0.33	17.5	46.0	9.0	297.0	7.7	26	900	1.0	FSD3BK334046XNLB
1200	0.47	24.0	46.0	10.0	423.0	6.8	26	900	1.2	FSD3BK474046XNLB
1200	0.68	26.0	46.0	12.0	612.0	5.8	26	900	1.2	FSD3BK684046XNLB
1200	1.0	29.0	46.0	11.0	900.0	5.0	26	900	1.2	FSD3BK105046XNLB
1200	1.0	24.5	58.0	10.0	550.0	5.5	32	550	1.2	FSD3BK105058XNLB
1200	1.2	32.0	46.0	11.0	1080.0	4.4	26	900	1.2	FSD3BK125046XNLB
1200	1.2	26.5	58.0	10.0	660.0	4.8	32	550	1.2	FSD3BK125058XNLB
1200	1.5	35.5	46.0	14.0	1350.0	3.9	26	900	1.2	FSD3BK155046XNLB
1200	1.5	29.5	58.0	13.0	825.0	4.4	32	550	1.2	FSD3BK155058XNLB
1200	2.0	33.0	58.0	15.0	1100.0	3.9	32	550	1.2	FSD3BK205058XNLB
1200	2.2	35.5	58.0	15.0	1210.0	3.7	32	550	1.2	FSD3BK225058XNLB
1200	3.0	41.0	58.0	15.0	1650.0	3.1	32	550	1.2	FSD3BK305058XNLB

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\* Specification are subject to change, please refer to approved data sheets.

## Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

### FSD series

#### Technical data

Vdc	Cap Value $\mu\text{F}$	Dimensions		Irms	Peak	ESR <sub>Typical</sub>	ESL	dv/dt	Lead Wire	Part Number
		D	L	100KHZ	Current	100KHZ				
		mm max	mm max	70°C A	A	m $\Omega$				
2000	0.047	14.0	34.0	5.0	56.4	30.0	26	1200	0.8	FSD3DK473034XNLB
2000	0.047	11.0	46.0	5.0	56.4	30.0	26	1200	0.8	FSD3DK473046XNLB
2000	0.068	16.0	34.0	7.0	136.0	16.8	22	2000	1.0	FSD3DK683034XNLB
2000	0.068	13.0	46.0	6.0	81.6	23.3	26	1200	1.0	FSD3DK683046XNLB
2000	0.10	19.0	34.0	10.0	200.0	12.0	22	2000	1.0	FSD3DK104034XNLB
2000	0.10	15.5	46.0	9.0	120.0	17.7	26	1200	1.0	FSD3DK104046XNLB
2000	0.15	18.5	46.0	12.0	180.0	9.5	26	1200	1.0	FSD3DK154046XNLB
2000	0.22	21.5	46.0	13.0	264.0	8.6	26	1200	1.0	FSD3DK224046XNLB
2000	0.33	26.5	46.0	14.0	396.0	6.7	26	1200	1.2	FSD3DK334046XNLB
2000	0.47	32.0	46.0	14.0	564.0	5.6	26	1200	1.2	FSD3DK474046XNLB
2000	0.56	34.5	46.0	15.0	672.0	5.2	26	1200	1.2	FSD3DK564046XNLB
2000	0.56	29.0	58.0	15.0	392.0	6.5	32	700	1.2	FSD3DK564058XNLB
2000	0.68	31.0	58.0	15.0	476.0	5.7	32	700	1.2	FSD3DK684058XNLB
2000	1.0	37.5	58.0	15.0	700.0	4.7	32	700	1.2	FSD3DK105058XNLB
2000	1.2	40.5	58.0	15.0	840.0	4.3	32	700	1.2	FSD3DK125058XNLB

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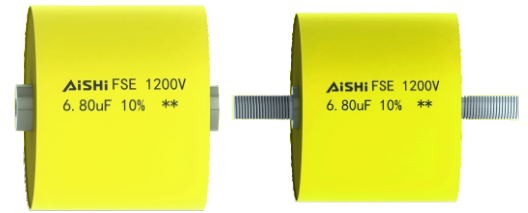
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (High current pulse, Axial type) (GTO) Snubber Applications

## FSE series

### Overview

The FSE series is constructed of metallized polypropylene film and double sided metallized film, with flame-retardant plastic case or polyester tape wrapping filled with resin and terminals.



### Applications

- Use in high voltage, high frequency circuit
- IGBT modules protection

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

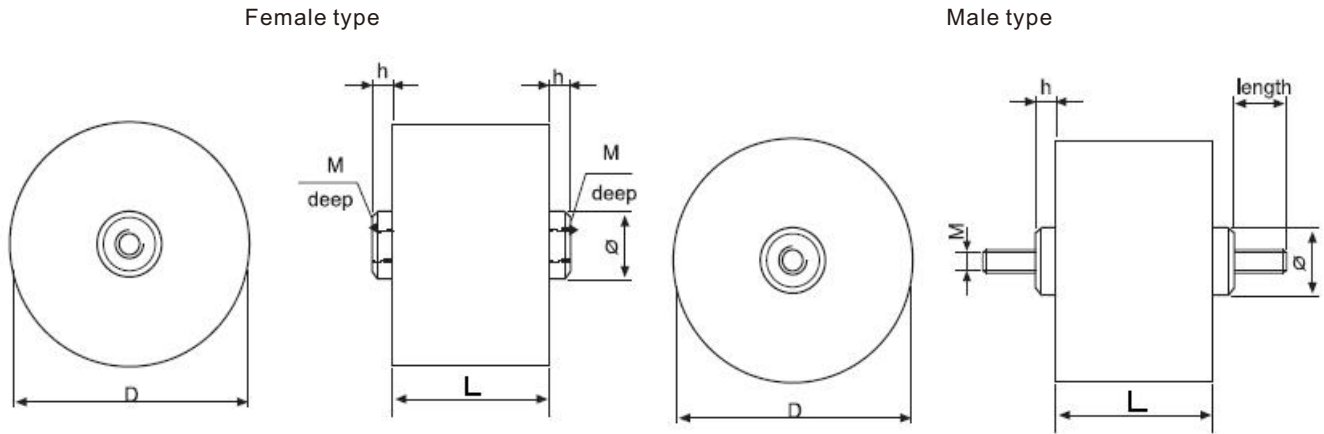
### Specifications

Items	Characteristics
Application	Snubber GTO
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Rated Voltage	1000Vdc ~ 3000Vdc
Capacitance Range	0.5μF ~ 12μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 1kHz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 50,000 seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T = +85°C
Protection	Flame retardant plastic case or polyester tape wrapping with epoxy resin fill
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied: 1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (High current pulse, Axial type) (GTO) Snubber Applications

## FSE series

### ■ Dimensions





# Metallized Polypropylene Film Capacitor (High current pulse, Axial type) (GTO) Snubber Applications

## FSE series

### ■ Technical data

Vdc	Cap Value μF	Dimensions		Irms	Peak	ESR <sub>Typical</sub>	Rth	dv/dt V/us	Output	Part Number
		D	L	100KHz	Current	100KHZ				
		mm max	mm max	70°C A	A	mΩ				
1000	1.5	45.0	37.0	43.0	825.0	1.0	11.0	550	M6*8	FSE3KK155037FN65
1000	3.0	56.0	40.0	55.0	1,500.0	0.8	7.4	500	M6*8	FSE3KK305040FN65
1000	4.0	65.0	40.0	65.0	2,000.0	0.8	6.0	500	M6*8	FSE3KK405040FN65
1000	5.0	72.0	40.0	70.0	2,500.0	0.7	5.0	500	M8*8	FSE3KK505040FN85
1000	6.0	78.0	40.0	80.0	3,000.0	0.7	4.5	500	M8*8	FSE3KK605040FN85
1000	7.0	84.0	40.0	85.0	3,500.0	0.6	4.0	500	M8*8	FSE3KK705040FN85
1000	8.0	75.0	50.0	85.0	3,600.0	0.6	4.0	450	M8*8	FSE3KK805050FN85
1000	10	86.0	50.0	88.0	4,500.0	0.7	3.5	450	M8*8	FSE3KK106050FN85
1000	12	86.0	50.0	95.0	5,400.0	0.7	3.5	450	M8*8	FSE3KK126050FN85
1200	1.0	45.0	37.0	40.0	700.0	1.2	11.5	700	M6*8	FSE3BK105037FN65
1200	2.0	52.0	40.0	45.0	1,200.0	1.0	8.5	600	M6*8	FSE3BK205040FN65
1200	3.0	62.0	40.0	60.0	1,800.0	0.8	6.5	600	M6*8	FSE3BK305040FN65
1200	4.0	72.0	40.0	70.0	2,400.0	0.7	5.0	600	M8*8	FSE3BK405040FN85
1200	5.0	80.0	40.0	80.0	3,000.0	0.7	4.5	600	M8*8	FSE3BK505040FN85
1200	6.0	86.0	40.0	85.0	3,600.0	0.7	4.0	600	M8*8	FSE3BK605040FN85
1200	8.0	86.0	50.0	90.0	4,000.0	0.7	3.8	500	M8*8	FSE3BK805050FN85
1200	10	86.0	50.0	95.0	5,000.0	0.7	3.5	500	M8*8	FSE3BK106050FN85
2000	0.50	45.0	37.0	35.0	600.0	1.5	12.0	1,200	M6*8	FSE3DK504037FN65
2000	1.0	56.0	40.0	50.0	1,200.0	1.2	7.5	1,200	M6*8	FSE3DK105040FN65
2000	1.5	68.0	40.0	60.0	1,800.0	1.0	5.5	1,200	M6*8	FSE3DK155040FN65
2000	2.0	78.0	40.0	75.0	2,400.0	0.9	4.5	1,200	M8*8	FSE3DK205040FN85
2000	2.5	88.0	40.0	80.0	3,000.0	0.8	4.0	1,200	M8*8	FSE3DK255040FN85
2000	3.0	82.0	50.0	80.0	2,550.0	0.8	4.0	850	M8*8	FSE3DK305050FN85
2000	4.0	86.0	50.0	85.0	3,400.0	0.8	3.5	850	M8*8	FSE3DK405050FN85
3000	0.68	50.0	50.0	35.0	816.0	2.5	12.0	1,200	M6*8	FSE3FK684037FN65
3000	0.75	52.0	50.0	45.0	900.0	2.0	7.5	1,200	M6*8	FSE3FK754050FN65
3000	1.0	60.0	50.0	50.0	1,200.0	1.5	5.5	1,200	M6*8	FSE3FK105050FN65
3000	1.2	67.0	50.0	60.0	1,440.0	1.4	4.5	1,200	M8*8	FSE3FK125050FN85
3000	1.5	73.0	50.0	65.0	1,800.0	1.2	4.0	1,200	M8*8	FSE3FK155050FN85
3000	2.0	85.0	50.0	70.0	2,400.0	1.0	4.0	1,200	M8*8	FSE3FK205050FN85
3000	2.5	93.0	50.0	85.0	3,000.0	0.9	3.5	1,200	M8*8	FSE3FK255050FN85
3000	0.68	38.0	64.0	30.0	578.0	4.0	14.5	850	M6*8	FSE3FK684064FN85
3000	1.0	45.0	64.0	40.0	850.0	3.0	8.5	850	M6*8	FSE3FK105064FN85
3000	1.5	55.0	64.0	55.0	1,275.0	2.0	6.5	850	M6*8	FSE3FK155064FN85
3000	2.0	63.0	64.0	60.0	1,700.0	1.5	5.5	850	M8*8	FSE3FK205064FN85
3000	2.5	70.0	64.0	70.0	2,125.0	1.4	5.0	850	M8*8	FSE3FK255064FN85
3000	3.0	76.0	64.0	85.0	2,550.0	1.2	4.0	850	M8*8	FSE3FK305064FN85

\* Customized products are available by request, contact us for more details.

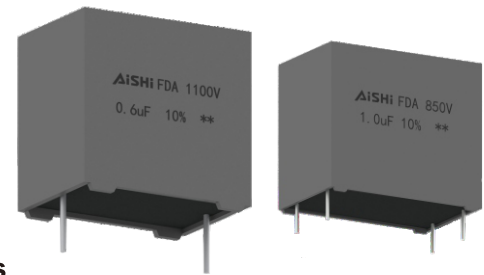
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead) DC-Link Applications

## FDA series

### Overview

The FDA series is constructed of metallized polypropylene film with rectangular plastic box filled with resin and 2 or 4 tinned copper wires.



### Applications

- DC filtering
- Frequency converters
- Industrial power supplies and motor drives
- Renewable energy inverters

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications

### Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Upper Temperature Tmax	+85°C
Lower Temperature Tmin	-40°C
Rated Voltage	450Vdc ~ 1200Vdc
Capacitance Range	1.0μF ~ 170μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.20%) at 1 KHz, C ≤ 20μF at +25°C ≤ 0.003 (0.30%) at 1 KHz, C > 20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0kVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 30,000 seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T = +70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ± 1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ± 2°C Relative humidity (RH) : 93% ± 2% Test duration : 56 days Capacitance change : ≤ ± 5% DF change (Δtgδ): ≤ 50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +85°C ± 2°C Voltage applied: 1.3 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change : ≤ ± 5% DF change (Δtgδ): ≤ 50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥ 50% of initial limit

# Metallized Polypropylene Film Capacitor (Radial Lead)

## DC-Link Applications

### FDA series

#### Technical data

Vdc	Cap Value μF	Dimensions					I <sub>rms</sub> 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
450	1.0	32.0	18.0	9.0	27.5	\	2.5	60	45.0	25	51.7	60	0.8	FDA2WK105G152GL5
450	2.0	32.0	18.0	9.0	27.5	\	3.0	120	30.0	25	50.5	60	0.8	FDA2WK205G152GL5
450	3.0	32.0	20.0	11.0	27.5	\	4.0	180	20.0	25	49.3	60	0.8	FDA2WK305G182GL5
450	4.0	32.0	20.0	11.0	27.5	\	4.0	240	18.0	25	48.4	60	0.8	FDA2WK405G182GL5
450	5.0	32.0	20.0	11.0	27.5	\	5.0	300	12.0	25	47.1	60	0.8	FDA2WK505G182GL5
450	5.0	32.0	22.0	13.0	27.5	\	5.5	300	11.0	25	46.5	60	0.8	FDA2WK505G212GL5
450	10.0	32.0	28.0	14.0	27.5	\	7.5	600	8.5	25	23.7	60	0.8	FDA2WK106G262GL5
450	10.0	32.0	28.0	18.0	27.5	\	9.0	600	8.0	25	23.7	60	0.8	FDA2WK106G332GL5
450	12.0	32.0	33.0	18.0	27.5	\	10.0	720	7.0	25	20.5	60	0.8	FDA2WK126G342GL5
450	15	32.0	37.0	22.0	27.5	\	11.5	900	6.0	25	14.5	60	0.8	FDA2WK156G402GL5
450	15	42.5	18.0	24.0	37.5	\	9.5	525	8.5	25	15.5	35	1.0	FDA2WK156K302KL5
450	18	32.0	37.0	22.0	27.5	\	10.0	1080	6.0	28	13.8	60	0.8	FDA2WK186G402GL5
450	20	32.0	37.0	22.0	27.5	\	11.0	1200	5.0	28	12.8	60	0.8	FDA2WK206G402GL5
450	22	32.0	37.0	22.0	27.5	\	12.5	1320	5.0	28	12.8	60	0.8	FDA2WK226G402GL5
450	25	42.5	37.0	22.0	37.5	10.2	12.5	875	5.5	30	12.3	35	1.2	FDA2WK256K274KB5
450	30	42.5	40.0	20.0	37.5	10.2	12.0	1050	6.0	30	11.6	35	1.2	FDA2WK306K244KB5
450	40	42.5	37.0	28.0	37.5	10.2	14.0	1400	5.5	30	9.3	35	1.2	FDA2WK406K374KB5
450	40	42.5	44.0	24.0	37.5	10.2	15.0	1400	5.2	30	9.0	35	1.2	FDA2WK406K324KB5
450	40	57.5	22.0	43.0	52.5	20.3	12.0	800	8.0	30	9.5	20	1.2	FDA2WK406M304MD5
450	50	42.5	45.0	30.0	37.5	20.3	15.0	1750	4.0	30	11.1	35	1.2	FDA2WK506K424KD5
450	50	57.5	22.0	43.0	52.5	20.3	14.0	1000	6.5	30	9.5	20	1.2	FDA2WK506M304MD5
450	55	57.5	45.0	30.0	52.5	20.3	15.5	1100	5.0	30	9.8	20	1.2	FDA2WK556M164MD5
450	60	57.5	45.0	30.0	52.5	20.3	16.5	1200	4.5	30	9.2	20	1.2	FDA2WK606M164MD5
450	60	42.5	45.0	30.0	37.5	20.3	16.5	2100	4.0	30	8.6	35	1.2	FDA2WK606K424KD5
450	80	57.5	45.0	30.0	52.5	20.3	16.0	1600	4.0	35	7.4	20	1.2	FDA2WK806M164MD5
450	100	57.5	50.0	35.0	52.5	20.3	18.0	2000	3.8	35	6.2	20	1.2	FDA2WK107M204MD5
450	130	57.5	60.0	35.0	52.5	20.3	22.0	2600	3.5	35	5.5	20	1.2	FDA2WK137M224MD5
450	140	57.5	65.0	35.0	52.5	20.3	24.0	2800	3.4	35	5.4	20	1.2	FDA2WK147M234MD5
450	150	57.5	70.0	35.0	52.5	20.3	26.0	3000	3.2	35	5.2	20	1.2	FDA2WK157M244MD5
450	160	57.5	80.0	35.0	52.5	20.3	28.0	3200	3.1	35	5.0	20	1.2	FDA2WK167M254MD5
450	170	57.5	80.0	35.0	52.5	20.3	30.0	3400	3.0	35	4.8	20	1.2	FDA2WK177M254MD5
550	3	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDA2JK305G182GL5
550	5	32.0	22.0	13.0	27.5	\	6.0	300	14.0	25	16.8	60	0.8	FDA2JK505G212GL5
550	8	32.0	28.0	14.0	27.5	\	8.5	480	12.5	25	12.6	60	0.8	FDA2JK805G262GL5
550	10	32.0	33.0	18.0	27.5	\	10.0	600	8.0	25	12.5	60	0.8	FDA2JK106G342GL5
550	15.0	32.0	37.0	22.0	27.5	\	12.0	900	6.5	28	9.1	60	0.8	FDA2JK156G402GL5
550	15.0	32.0	37.0	22.0	27.5	10.2	13.0	900	5.5	28	8.1	60	1.2	FDA2JK156G404GB5
550	15.0	42.5	18.0	24.0	37.5	\	10.5	525	6.5	28	8.3	35	1.0	FDA2JK156K302KL5
550	20.0	42.5	40.0	20.0	37.5	10.2	12.5	700	6.5	30	9.8	35	1.2	FDA2JK206K244KB5
550	22.0	42.5	40.0	20.0	37.5	10.2	13.5	770	6.5	30	8.4	35	1.2	FDA2JK226K244KB5
550	25.0	42.5	40.0	20.0	37.5	10.2	14.5	875	6.5	30	7.3	35	1.2	FDA2JK256K244KB5
550	30.0	42.5	44.0	24.0	37.5	10.2	16.0	1050	6.0	30	6.5	35	1.2	FDA2JK306K324KB5
550	35.0	42.5	45.0	30.0	37.5	20.3	18.0	1225	6.0	30	5.1	35	1.2	FDA2JK356K424KD5
550	40.0	42.5	45.0	30.0	37.5	20.3	18.0	1400	5.5	30	5.1	35	1.2	FDA2JK406K424KD5
550	40	57.5	22.0	43.0	52.5	20.3	16.0	800	5.8	30	5.2	20	1.2	FDA2JK406M304MD5
550	50	42.5	50.0	35.0	37.5	20.3	20.0	1750	5.0	30	5.0	35	1.2	FDA2JK506K474KD5

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# Metallized Polypropylene Film Capacitor (Radial Lead) DC-Link Applications

## FDA series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
550	60.0	57.5	45.0	30.0	52.5	20.3	18.0	1200	4.8	35	6.2	20	1.2	FDA2JK606M164MD5
550	75.0	57.5	50.0	35.0	52.5	20.3	20.0	1500	5.0	35	5.0	20	1.2	FDA2JK756M204MD5
550	100.0	57.5	55.0	45.0	52.5	20.3	24.0	2000	4.5	35	3.9	20	1.2	FDA2JK107M324MD5
550	110.0	57.5	55.0	45.0	52.5	20.3	26.0	2200	4.0	35	3.7	20	1.2	FDA2JK117M324MD5
550	130.0	57.5	60.0	35.0	52.5	20.3	23.0	2600	3.4	35	5.4	20	1.2	FDA2JK137M224MD5
550	140.0	57.5	65.0	35.0	52.5	20.3	25.0	2800	3.3	35	5.3	20	1.2	FDA2JK147M234MD5
550	150.0	57.5	70.0	35.0	52.5	20.3	27.0	3000	3.1	35	5.0	20	1.2	FDA2JK157M244MD5
550	160.0	57.5	80.0	35.0	52.5	20.3	29.0	3200	3.0	35	4.8	20	1.2	FDA2JK167M254MD5
550	170.0	57.5	80.0	35.0	52.5	20.3	32.0	3400	2.8	35	4.7	20	1.2	FDA2JK177M254MD5
600	3	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDA2KK305G182GL5
600	4	32.0	20.0	11.0	27.5	\	5.0	240	26.0	25	14.3	60	0.8	FDA2KK405G182GL5
600	5	32.0	28.0	14.0	27.5	\	6.0	300	14.5	25	26.5	60	0.8	FDA2KK505G262GL5
600	8	32.0	28.0	14.0	27.5	\	7.5	480	12.0	25	17.8	60	0.8	FDA2KK805G262GL5
600	10	32.0	33.0	18.0	27.5	\	8.5	600	7.5	25	19.8	60	0.8	FDA2KK106G342GL5
600	12	32.0	33.0	18.0	27.5	\	9.5	720	7.5	25	15.8	60	0.8	FDA2KK126G342GL5
600	12	42.5	18.0	24.0	37.5	\	8.0	420	9.5	25	16.8	35	1.0	FDA2KK126K302KL5
600	15	32.0	37.0	22.0	27.5	\	10.5	900	7.5	28	12.1	60	0.8	FDA2KK156G402GL5
600	15	42.5	18.0	24.0	37.5	\	12.0	525	6.0	28	16.2	35	1.0	FDA2KK156K302KL5
600	20	42.5	40.0	20.0	37.5	10.2	11.0	700	6.0	30	13.8	35	1.2	FDA2KK206K244KB5
600	30	42.5	37.0	28.0	37.5	10.2	13.0	1050	5.5	30	10.8	35	1.2	FDA2KK306K374KB5
600	35	42.5	44.0	24.0	37.5	10.2	16.5	1225	5.0	30	8.5	35	1.2	FDA2KK356K324KB5
600	35	57.5	22.0	43.0	52.5	20.3	13.5	700	5.5	30	10.7	20	1.2	FDA2KK356M304MD5
600	40	42.5	45.0	30.0	37.5	20.3	18.0	1400	4.0	30	7.7	35	1.2	FDA2KK406K424KD5
600	50	57.5	50.0	35.0	52.5	20.3	14.0	1000	6.5	35	7.8	20	1.2	FDA2KK506M204MD5
600	60	57.5	50.0	35.0	52.5	20.3	16.0	1200	5.0	35	7.8	20	1.2	FDA2KK606M204MD5
600	70	57.5	50.0	35.0	52.5	20.3	18.0	1400	5.0	35	6.2	20	1.2	FDA2KK706M204MD5
600	80	57.5	55.0	45.0	52.5	20.3	20.0	1600	4.0	35	6.3	20	1.2	FDA2KK806M324MD5
600	90	57.5	55.0	45.0	52.5	20.3	24.0	1800	4.0	35	4.3	20	1.2	FDA2KK906M324MD5
600	100	57.5	53.0	50.0	52.5	20.3	26.0	2000	4.0	35	3.7	20	1.2	FDA2KK107M354MD5
600	110	57.5	53.0	50.0	52.5	20.3	28.0	2200	3.5	35	3.6	20	1.2	FDA2KK117M354MD5
600	120	57.5	60.0	35.0	52.5	20.3	30.0	2400	3.4	35	3.5	20	1.2	FDA2KK127M224MD5
600	130	57.5	65.0	35.0	52.5	20.3	32.0	2600	3.3	35	3.4	20	1.2	FDA2KK137M234MD5
600	140	57.5	70.0	35.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDA2KK147M244MD5
600	140	57.5	65.0	45.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDA2KK147M344MD5
600	150	57.5	80.0	35.0	52.5	20.3	36.0	3000	3.0	35	3.3	20	1.2	FDA2KK157M254MD5
700	1.0	32.0	18.0	9.0	27.5	\	2.5	60	54.0	25	50.6	60	0.8	FDA2MK105G152GL5
700	2.0	32.0	18.0	9.0	27.5	\	3.0	120	35.0	25	49.5	60	0.8	FDA2MK205G152GL5
700	3.0	32.0	20.0	11.0	27.5	\	4.5	180	28.0	25	47.0	60	0.8	FDA2MK305G182GL5
700	3.3	32.0	28.0	14.0	27.5	\	5.5	198	26.0	25	31.5	60	0.8	FDA2MK335G262GL5
700	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.0	25	26.5	60	0.8	FDA2MK505G262GL5
700	6.0	32.0	28.0	18.0	27.5	\	6.0	360	14.0	25	16.9	60	0.8	FDA2MK605G332GL5
700	8.0	32.0	33.0	18.0	27.5	\	9.0	480	10.0	25	12.3	60	0.8	FDA2MK805G342GL5
700	10.0	32.0	33.0	18.0	27.5	\	10.0	600	7.0	25	14.3	60	0.8	FDA2MK106G342GL5
700	10.0	32.0	37.0	22.0	27.5	\	12.0	600	6.5	28	10.7	60	0.8	FDA2MK106G402GL5
700	10	42.5	18.0	24.0	37.5	\	11.5	350	7.5	30	10.1	35	1.0	FDA2MK106K302KL5
700	12	32.0	37.0	22.0	27.5	\	12.5	720	6.0	28	9.2	60	0.8	FDA2MK126G402GL5

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# Metallized Polypropylene Film Capacitor (Radial Lead)

## DC-Link Applications

### FDA series

#### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
700	12	42.5	18.0	24.0	37.5	\	12.0	420	7.0	30	9.8	35	1.0	FDA2MK126K302KL5
700	15	42.5	33.5	22.0	37.5	\	9.0	525	9.0	30	13.7	35	1.0	FDA2MK156K262KL5
700	15	42.5	33.5	22.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDA2MK156K264KB5
700	15	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDA2MK156K244KB5
700	20	42.5	37.0	28.0	37.5	10.2	12.0	700	7.5	30	11.6	35	1.2	FDA2MK206K374KB5
700	22	42.5	44.0	24.0	37.5	10.2	14.0	770	6.5	30	9.3	35	1.2	FDA2MK226K324KB5
700	25	42.5	44.0	24.0	37.5	10.2	16.0	875	6.0	30	7.8	35	1.2	FDA2MK256K324KB5
700	30	42.5	45.0	30.0	37.5	20.3	16.0	1050	5.8	30	8.7	35	1.2	FDA2MK306K424KD5
700	30	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	9.8	20	1.2	FDA2MK306M304MD5
700	35	42.5	50.0	35.0	37.5	20.3	20.0	1225	5.5	30	6.3	35	1.2	FDA2MK356K474KD5
700	40	57.5	45.0	30.0	52.5	20.3	14.0	800	5.0	35	8.5	20	1.2	FDA2MK406M164MD5
700	45	57.5	45.0	30.0	52.5	20.3	15.5	900	5.0	35	7.6	20	1.2	FDA2MK456M164MD5
700	50	57.5	50.0	35.0	52.5	20.3	15.0	1000	4.8	35	8.1	20	1.2	FDA2MK506M204MD5
700	55	57.5	50.0	35.0	52.5	20.3	16.0	1100	4.5	35	8.7	20	1.2	FDA2MK556M204MD5
700	60	57.5	50.0	35.0	52.5	20.3	18.0	1200	4.0	35	7.7	20	1.2	FDA2MK606M204MD5
700	65	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDA2MK656M324MD5
700	70	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDA2MK706M324MD5
700	75	57.5	55.0	45.0	52.5	20.3	20.0	1500	3.8	35	6.3	20	1.2	FDA2MK756M324MD5
700	80	57.5	55.0	45.0	52.5	20.3	22.0	1600	3.5	35	5.9	20	1.2	FDA2MK806M324MD5
700	80	57.5	60.0	35.0	52.5	20.3	23.0	1600	3.4	35	5.8	20	1.2	FDA2MK806M224MD5
700	90	57.5	55.0	45.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDA2MK906M324MD5
700	90	57.5	60.0	35.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDA2MK906M224MD5
700	100	57.5	65.0	35.0	52.5	20.3	26.0	2000	3.5	35	5.9	20	1.2	FDA2MK107M234MD5
700	110	57.5	70.0	35.0	52.5	20.3	28.0	2200	3.4	35	5.8	20	1.2	FDA2MK117M244MD5
700	120	57.5	80.0	35.0	52.5	20.3	30.0	2400	3.0	35	5.6	20	1.2	FDA2MK127M254MD5
700	130	57.5	65.0	45.0	52.5	20.3	32.0	2600	2.8	35	5.4	20	1.2	FDA2MK137M344MD5
800	1.0	32.0	18.0	9.0	27.5	\	2.0	60	62.0	25	45.7	60	0.8	FDA2NK105G152GL5
800	2.0	32.0	20.0	11.0	27.5	\	3.5	120	31.0	25	42.5	60	0.8	FDA2NK205G182GL5
800	3.0	32.0	22.0	13.0	27.5	\	4.5	180	21.0	25	35.4	60	0.8	FDA2NK305G212GL5
800	3.3	32.0	28.0	14.0	27.5	\	4.0	198	25.0	25	32.1	60	0.8	FDA2NK335G262GL5
800	5.0	32.0	28.0	14.0	27.5	\	6.0	300	12.0	25	26.5	60	0.8	FDA2NK505G262GL5
800	6.0	32.0	28.0	18.0	27.5	\	7.5	360	10.5	25	18.6	60	0.8	FDA2NK605G332GL5
800	8.0	32.0	33.0	18.0	27.5	\	9.5	480	9.5	25	14.3	60	0.8	FDA2NK805G342GL5
800	9.0	32.0	33.0	18.0	27.5	\	10.0	540	8.5	25	9.1	60	0.8	FDA2NK905G342GL5
800	10	32.0	37.0	22.0	27.5	\	11.5	600	9.5	28	8.0	60	0.8	FDA2NK106G402GL5
800	10	42.5	32.0	19.0	37.5	\	8.0	350	12.5	30	15.8	35	1.0	FDA2NK106K212KL5
800	15	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDA2NK156K244KB5
800	20	42.5	37.0	28.0	37.5	10.2	12.0	700	7.0	30	11.6	35	1.2	FDA2NK206K374KB5
800	20	42.5	44.0	24.0	37.5	10.2	13.5	700	6.5	30	11.8	35	1.2	FDA2NK206K324KB5
800	22	42.5	44.0	24.0	37.5	10.2	14.0	770	6.0	30	9.3	35	1.2	FDA2NK226K324KB5
800	25	42.5	45.0	30.0	37.5	20.3	14.0	875	5.5	30	7.5	35	1.2	FDA2NK256K424KD5
800	30	42.5	45.0	30.0	37.5	20.3	16.0	1050	4.5	30	8.7	35	1.2	FDA2NK306K424KD5
800	35	57.5	45.0	30.0	52.5	20.3	14.2	700	6.5	35	7.6	20	1.2	FDA2NK356M164MD5
800	40	57.5	45.0	30.0	52.5	20.3	14.0	800	6.0	35	8.5	20	1.2	FDA2NK406M164MD5
800	45	57.5	45.0	30.0	52.5	20.3	15.5	900	5.5	35	7.6	20	1.2	FDA2NK456M164MD5
800	47	57.5	50.0	35.0	52.5	20.3	17.5	940	5.0	35	6.5	20	1.2	FDA2NK476M204MD5

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# Metallized Polypropylene Film Capacitor (Radial Lead) DC-Link Applications

## FDA series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
800	50	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	20	1.2	FDA2NK506M204MD5
800	55	57.5	50.0	35.0	52.5	20.3	17.0	1100	4.6	35	6.9	20	1.2	FDA2NK556M204MD5
800	65	57.5	60.0	35.0	52.5	20.3	19.0	1300	4.0	35	7.3	20	1.2	FDA2NK656M224MD5
800	65	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDA2NK656M324MD5
800	70	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDA2NK706M324MD5
800	70	57.5	60.0	35.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDA2NK706M224MD5
800	75	57.5	55.0	45.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDA2NK756M324MD5
800	75	57.5	65.0	35.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDA2NK756M234MD5
800	80	57.5	65.0	45.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDA2NK806M344MD5
800	80	57.5	70.0	35.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDA2NK806M244MD5
800	90	57.5	65.0	45.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDA2NK906M344MD5
800	90	57.5	80.0	35.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDA2NK906M254MD5
800	100	57.5	65.0	45.0	52.5	20.3	28.0	2000	3.2	35	4.8	20	1.2	FDA2NK107M344MD5
900	1.0	32.0	18.0	9.0	27.5	\	2.0	60	63.0	25	46.8	60	0.8	FDA2QK105G152GL5
900	2.0	32.0	20.0	11.0	27.5	\	3.0	120	25.0	25	44.4	60	0.8	FDA2QK205G182GL5
900	3.0	32.0	22.0	13.0	27.5	\	5.0	180	18.5	25	21.6	60	0.8	FDA2QK305G212GL5
900	3.3	32.0	24.5	15.0	27.5	\	5.0	198	18.5	25	21.6	60	0.8	FDA2QK335G272GL5
900	5.0	32.0	28.0	18.0	27.5	\	7.0	300	12.5	25	16.3	60	0.8	FDA2QK505G332GL5
900	6.0	32.0	33.0	18.0	27.5	\	8.0	360	11.0	25	14.2	60	0.8	FDA2QK605G342GL5
900	8.0	32.0	37.0	22.0	27.5	\	10.5	480	10.0	28	9.1	60	0.8	FDA2QK805G402GL5
900	10	32.0	37.0	22.0	27.5	\	12.0	600	10.0	28	6.9	60	0.8	FDA2QK106G402GL5
900	10	42.5	40.0	20.0	37.5	\	8.5	350	12.0	30	11.5	35	1.0	FDA2QK106K242KL5
900	10	42.5	40.0	20.0	37.5	10.2	9.5	350	11.5	30	9.6	35	1.2	FDA2QK106K244KB5
900	15	42.5	44.0	24.0	37.5	\	10.5	525	8.0	30	11.3	35	1.0	FDA2QK156K322KL5
900	15	42.5	44.0	24.0	37.5	10.2	12.0	525	7.5	30	9.3	35	1.2	FDA2QK156K324KB5
900	18	42.5	44.0	24.0	37.5	\	10.5	630	8.0	30	11.3	35	1.0	FDA2QK186K322KL5
900	18	42.5	44.0	24.0	37.5	10.2	12.0	630	7.5	30	9.3	35	1.2	FDA2QK186K324KB5
900	20	42.5	45.0	30.0	37.5	\	14.0	700	6.0	30	8.5	35	1.0	FDA2QK206K422KL5
900	20	42.5	45.0	30.0	37.5	20.3	15.0	700	5.5	30	8.1	35	1.2	FDA2QK206K424KD5
900	20	57.5	22.0	43.0	52.5	20.3	12.0	400	8.6	35	10.5	20	1.2	FDA2QK206M304MD5
900	25	42.5	45.0	30.0	37.5	20.3	17.0	875	5.5	30	6.3	35	1.2	FDA2QK256K424KD5
900	30	42.5	50.0	35.0	37.5	20.3	19.0	1050	5.0	30	5.5	35	1.2	FDA2QK306K474KD5
900	30	57.5	45.0	30.0	52.5	20.3	150.0	600	5.5	35	8.1	20	1.2	FDA2QK306M164MD5
900	35	57.5	50.0	35.0	52.5	20.3	15.5	700	5.5	35	7.6	20	1.2	FDA2QK356M204MD5
900	40	57.5	50.0	35.0	52.5	20.3	16.0	800	6.5	35	6.0	20	1.2	FDA2QK406M204MD5
900	50	57.5	50.0	35.0	52.5	20.3	18.0	1000	3.6	35	8.6	20	1.2	FDA2QK506M204MD5
900	55	57.5	60.0	35.0	52.5	20.3	19.0	1100	3.5	35	7.9	20	1.2	FDA2QK556M224MD5
900	55	57.5	55.0	45.0	52.5	20.3	20.0	1100	3.4	35	7.4	20	1.2	FDA2QK556M324MD5
900	60	57.5	55.0	45.0	52.5	20.3	20.0	1200	3.4	35	7.4	20	1.2	FDA2QK606M324MD5
900	65	57.5	70.0	35.0	52.5	20.3	22.0	1300	3.3	35	7.0	20	1.2	FDA2QK656M244MD5
900	70	57.5	55.0	45.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDA2QK706M324MD5
900	70	57.5	80.0	35.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDA2QK706M254MD5
900	80	57.5	65.0	45.0	52.5	20.3	25.0	1600	3.2	35	6.7	20	1.2	FDA2QK806M344MD5
1000	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDA3KK105G182GL5
1000	2.0	32.0	22.0	13.0	27.5	\	3.5	160	30.0	25	27.2	80	0.8	FDA3KK205G212GL5
1000	3.0	32.0	24.5	15.0	27.5	\	5.0	240	25.0	25	16.0	80	0.8	FDA3KK305G272GL5

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# Metallized Polypropylene Film Capacitor (Radial Lead) DC-Link Applications

## FDA series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1								
		mm	mm	mm	mm	mm								
1000	5.0	32.0	33.0	18.0	27.5	\	8.0	400	14.0	25	11.2	80	0.8	FDA3KK505G342GL5
1000	8	32.0	37.0	22.0	27.5	\	10.0	640	12.0	28	8.3	80	0.8	FDA3KK805G402GL5
1000	10	42.5	40.0	20.0	37.5	\	8.5	400	12.0	30	11.5	40	1.0	FDA3KK106K242KL5
1000	10	42.5	40.0	20.0	37.5	10.2	9.5	400	11.5	30	9.6	40	1.2	FDA3KK106K244KB5
1000	12	42.5	44.0	24.0	37.5	10.2	10.5	480	9.0	30	10.1	40	1.2	FDA3KK126K324KB5
1000	15	42.5	44.0	24.0	37.5	\	10.5	600	8.0	30	11.3	40	1.0	FDA3KK156K322KL5
1000	15	42.5	44.0	24.0	37.5	10.2	12.0	600	7.5	30	9.3	40	1.2	FDA3KK156K324KB5
1000	15	42.5	45.0	30.0	37.5	20.3	14.0	600	7.5	30	6.8	40	1.2	FDA3KK156K424KD5
1000	15	57.5	22.0	43.0	52.5	20.3	12.0	375	8.5	30	7.9	25	1.2	FDA3KK156M304MD5
1000	20	42.5	45.0	30.0	37.5	20.3	15.0	800	6.5	30	6.8	40	1.2	FDA3KK206K424KD5
1000	25	42.5	50.0	35.0	37.5	20.3	18.0	1000	5.5	30	5.6	40	1.2	FDA3KK256K474KD5
1000	30	57.5	45.0	30.0	52.5	20.3	15.0	750	5.5	35	8.1	25	1.2	FDA3KK306M164MD5
1000	35	57.5	50.0	35.0	52.5	20.3	16.0	875	5.5	35	7.1	25	1.2	FDA3KK356M204MD5
1000	40	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	25	1.2	FDA3KK406M204MD5
1000	40	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.0	35	7.6	25	1.2	FDA3KK406M324MD5
1000	50	57.5	55.0	45.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDA3KK506M324MD5
1000	50	57.5	65.0	35.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDA3KK506M234MD5
1000	55	57.5	70.0	35.0	52.5	20.3	20.0	1375	4.4	35	6.1	25	1.2	FDA3KK556M244MD5
1000	60	57.5	80.0	35.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDA3KK606M254MD5
1000	60.0	57.5	65.0	45.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDA3KK606M344MD5
1100	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDA3MK105G182GL5
1100	1.5	32.0	22.0	13.0	27.5	\	3.5	120	30.0	25	27.2	80	0.8	FDA3MK155G212GL5
1100	2.0	32.0	24.5	15.0	27.5	\	4.0	160	25.0	25	25.0	80	0.8	FDA3MK205G272GL5
1100	2.2	32.0	28.0	14.0	27.5	\	5.0	176	16.5	25	24.2	80	0.8	FDA3MK225G262GL5
1100	3.3	32.0	28.0	18.0	27.5	\	6.5	264	11.5	25	20.6	80	0.8	FDA3MK335G332GL5
1100	4.0	32.0	33.0	18.0	27.5	\	8.0	320	10.5	25	14.9	80	0.8	FDA3MK405G342GL5
1100	5.0	32.0	37.0	22.0	27.5	\	8.5	400	9.5	28	14.6	80	0.8	FDA3MK505G402GL5
1100	6.8	42.5	33.5	22.0	37.5	10.2	12.0	272	13.5	30	5.1	40	1.2	FDA3MK685K264KB5
1100	8.0	42.5	40.0	20.0	37.5	\	10.5	320	14.0	30	6.5	40	1.0	FDA3MK805K242KL5
1100	8.0	42.5	40.0	20.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDA3MK805K244KB5
1100	8.0	42.5	37.0	22.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDA3MK805K274KB5
1100	9	42.5	37.0	22.0	37.5	10.2	12.8	360	12.2	30	5.0	40	1.2	FDA3MK905K274KB5
1100	10	42.5	44.0	24.0	37.5	\	14.0	400	9.0	30	5.7	40	1.0	FDA3MK106K322KL5
1100	10	42.5	44.0	24.0	37.5	10.2	15.0	400	8.5	30	5.2	40	1.2	FDA3MK106K324KB5
1100	12	42.5	45.0	30.0	37.5	20.3	15.5	480	7.5	30	5.5	40	1.2	FDA3MK126K424KD5
1100	15	42.5	45.0	30.0	37.5	20.3	16.0	600	7.0	30	5.4	40	1.2	FDA3MK156K424KD5
1100	18	42.5	50.0	35.0	37.5	20.3	15.5	720	7.5	30	5.5	40	1.2	FDA3MK186K474KD5
1100	20	42.5	50.0	35.0	37.5	20.3	16.5	800	7.2	35	5.5	40	1.2	FDA3MK206K474KD5
1100	20	57.5	45.0	30.0	52.5	20.3	12.0	500	8.5	35	8.2	25	1.2	FDA3MK206M164MD5
1100	25	57.5	50.0	35.0	52.5	20.3	13.0	625	8.2	35	8.0	25	1.2	FDA3MK256M204MD5
1100	30	57.5	50.0	35.0	52.5	20.3	15.0	750	5.0	35	8.9	25	1.2	FDA3MK306M204MD5
1100	35	57.5	60.0	35.0	52.5	20.3	16.0	875	4.9	35	8.7	25	1.2	FDA3MK356M224MD5
1100	40	57.5	65.0	35.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDA3MK406M234MD5
1100	40	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDA3MK406M324MD5
1100	45	57.5	70.0	35.0	52.5	20.3	18.0	1125	5.4	35	6.2	25	1.2	FDA3MK456M244MD5
1100	50	57.5	65.0	45.0	52.5	20.3	19.5	1250	5.2	35	5.8	25	1.2	FDA3MK506M344MD5

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# Metallized Polypropylene Film Capacitor (Radial Lead) DC-Link Applications

## FDA series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
1200	1.0	32.0	20.0	11.0	27.5	\	4.5	90	32.5	25	15.2	90	0.8	FDA3BK105G182GL5
1200	2.0	32.0	24.5	15.0	27.5	\	5.0	180	32.5	25	12.3	90	0.8	FDA3BK205G272GL5
1200	2.2	32.0	28.0	18.0	27.5	\	5.5	198	17.0	25	19.4	90	0.8	FDA3BK225G332GL5
1200	3.0	32.0	28.0	18.0	27.5	\	7.0	270	16.0	25	12.8	90	0.8	FDA3BK305G332GL5
1200	3.3	32.0	33.0	18.0	27.5	\	8.0	297	13.5	25	11.6	90	0.8	FDA3BK335G342GL5
1200	5.0	32.0	37.0	22.0	27.5	\	10.0	450	12.0	28	8.3	90	0.8	FDA3BK505G402GL5
1200	5.0	42.5	33.5	22.0	37.5	\	7.5	225	15.5	30	11.5	45	1.0	FDA3BK505K262KL5
1200	6.0	42.5	40.0	20.0	37.5	\	7.5	270	15.5	30	11.5	45	1.0	FDA3BK605K242KL5
1200	7.0	42.5	37.0	22.0	37.5	10.2	8.0	315	15.2	30	11.0	45	1.2	FDA3BK705K274KB5
1200	8.0	42.5	44.0	24.0	37.5	10.2	9.0	360	12.5	30	9.9	45	1.2	FDA3BK805K324KB5
1200	10	42.5	44.0	24.0	37.5	10.2	10.0	450	10.5	30	9.5	45	1.2	FDA3BK106K324KB5
1200	10	42.5	45.0	30.0	37.5	20.3	12.0	450	8.0	30	8.7	45	1.2	FDA3BK106K424KD5
1200	15	42.5	50.0	35.0	37.5	20.3	15.0	675	6.5	30	6.8	45	1.2	FDA3BK106K474KD5
1200	20	57.5	45.0	30.0	52.5	20.3	13.0	600	8.5	35	9.7	30	1.2	FDA3BK206M164MD5
1200	25	57.5	50.0	35.0	52.5	20.3	15.0	750	6.5	35	9.1	30	1.2	FDA3BK256M204MD5
1200	30	57.5	55.0	45.0	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDA3BK306M324MD5
1200	30	57.5	60.0	35.0	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDA3BK306M224MD5
1200	35	57.5	55.0	45.0	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDA3BK356M324MD5
1200	35	57.5	70.0	35.0	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDA3BK356M244MD5
1200	40	57.5	65.0	45.0	52.5	20.3	20.0	1200	4.5	35	5.6	30	1.2	FDA3BK406M344MD5
1200	45	57.5	65.0	45.0	52.5	20.3	22.0	1350	4.3	35	5.5	30	1.2	FDA3BK456M344MD5

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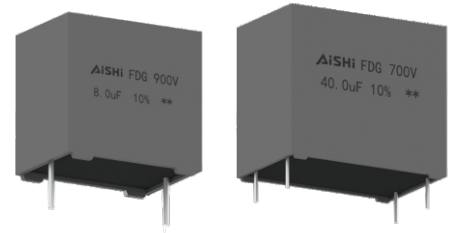


# Metallized Polypropylene Film Capacitor (Radial Lead, THB\* compliance) DC-Link Applications

## FDG series

### Overview

The FDG series is constructed of metallized polypropylene film with rectangular plastic box filled with resin and 2 or 4 tinned copper wires.



### Applications

- High performance DC filtering
- Frequency converters
- Industrial power supplies and motor drives
- Renewable energy inverters
- Energy storage

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

### Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Upper Temperature Tmax	+85°C
Lower Temperature Tmin	-40°C
Rated Voltage	450Vdc ~ 1200Vdc
Capacitance Range	1.0μF ~ 170μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤0.002 (0.20%) at 1 KHz, C≤20uF at +25°C ≤0.003 (0.30%) at 1 KHz, C>20uF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C≥30,000 seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C ±2°C Relative humidity (RH) :85% ±2%
	Loading Voltage: Rated voltage (DC)
	Test duration : 1000 hours Capacitance change : ≤±5%

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## DC-Link Applications

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#### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
450	1.0	32.0	18.0	9.0	27.5	\	2.5	60	45.0	25	51.7	60	0.8	FDG2WK105G152GL5
450	2.0	32.0	18.0	9.0	27.5	\	3.0	120	30.0	25	50.5	60	0.8	FDG2WK205G152GL5
450	3.0	32.0	20.0	11.0	27.5	\	4.0	180	20.0	25	49.3	60	0.8	FDG2WK305G182GL5
450	4.0	32.0	20.0	11.0	27.5	\	4.0	240	18.0	25	48.4	60	0.8	FDG2WK405G182GL5
450	5.0	32.0	20.0	11.0	27.5	\	5.0	300	12.0	25	47.1	60	0.8	FDG2WK505G182GL5
450	5.0	32.0	22.0	13.0	27.5	\	5.5	300	11.0	25	46.5	60	0.8	FDG2WK505G212GL5
450	10	32.0	28.0	14.0	27.5	\	7.5	600	8.5	25	23.7	60	0.8	FDG2WK106G262GL5
450	10	32.0	28.0	18.0	27.5	\	9.0	600	8.0	25	23.7	60	0.8	FDG2WK106G332GL5
450	12	32.0	33.0	18.0	27.5	\	10.0	720	7.0	25	20.5	60	0.8	FDG2WK126G342GL5
450	15	32.0	37.0	22.0	27.5	\	11.5	900	6.0	25	14.5	60	0.8	FDG2WK156G402GL5
450	15	42.5	18.0	24.0	37.5	\	9.5	450	8.5	25	15.5	30	1.0	FDG2WK156K302KL5
450	18	32.0	37.0	22.0	27.5	\	10.0	1080	6.0	28	13.8	60	0.8	FDG2WK186G402GL5
450	20	32.0	37.0	22.0	27.5	\	11.0	1200	5.0	28	12.8	60	0.8	FDG2WK206G402GL5
450	22	32.0	37.0	22.0	27.5	\	12.5	1320	5.0	28	12.8	60	0.8	FDG2WK226G402GL5
450	25	42.5	37.0	22.0	37.5	10.2	12.5	875	5.5	30	12.3	35	1.2	FDG2WK256K274KB5
450	30	42.5	40.0	20.0	37.5	10.2	12.0	1050	6.0	30	11.6	35	1.2	FDG2WK306K244KB5
450	40	42.5	37.0	28.0	37.5	10.2	14.0	1400	5.5	30	9.3	35	1.2	FDG2WK406K374KB5
450	40	42.5	44.0	24.0	37.5	10.2	15.0	1400	5.2	30	9.0	35	1.2	FDG2WK406K324KB5
450	40	57.5	22.0	43.0	52.5	20.3	12.0	800	8.0	30	9.5	20	1.2	FDG2WK406M304MD5
450	50	42.5	45.0	30.0	37.5	20.3	15.0	1750	4.0	30	11.1	35	1.2	FDG2WK506K424KD5
450	50	57.5	22.0	43.0	52.5	20.3	14.0	1000	6.5	30	9.5	20	1.2	FDG2WK506M304MD5
450	55	57.5	45.0	30.0	52.5	20.3	15.5	1100	5.0	30	9.8	20	1.2	FDG2WK556M164MD5
450	60	57.5	45.0	30.0	52.5	20.3	16.5	1200	4.5	30	9.2	20	1.2	FDG2WK606M164MD5
450	60	42.5	45.0	30.0	37.5	20.3	16.5	2100	4.0	30	8.6	35	1.2	FDG2WK606K424KD5
450	80	57.5	45.0	30.0	52.5	20.3	16.0	1600	4.0	35	7.4	20	1.2	FDG2WK806M164MD5
450	100	57.5	50.0	35.0	52.5	20.3	18.0	2000	3.8	35	6.2	20	1.2	FDG2WK107M204MD5
450	130	57.5	60.0	35.0	52.5	20.3	22.0	2600	3.5	35	5.5	20	1.2	FDG2WK137M224MD5
450	140	57.5	65.0	35.0	52.5	20.3	24.0	2800	3.4	35	5.4	20	1.2	FDG2WK147M234MD5
450	150	57.5	70.0	35.0	52.5	20.3	26.0	3000	3.2	35	5.2	20	1.2	FDG2WK157M244MD5
450	160	57.5	80.0	35.0	52.5	20.3	28.0	3200	3.1	35	5.0	20	1.2	FDG2WK167M254MD5
450	170	57.5	80.0	35.0	52.5	20.3	30.0	3400	3.0	35	4.8	20	1.2	FDG2WK177M254MD5
550	3.0	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDG2JK305G182GL5
550	5.0	32.0	22.0	13.0	27.5	\	6.0	300	14.0	25	16.8	60	0.8	FDG2JK505G212GL5
550	8.0	32.0	28.0	14.0	27.5	\	8.5	480	12.5	25	12.6	60	0.8	FDG2JK805G262GL5
550	10	32.0	33.0	18.0	27.5	\	10.0	600	8.0	25	12.5	60	0.8	FDG2JK106G342GL5
550	15	32.0	37.0	22.0	27.5	\	12.0	900	6.5	28	9.1	60	0.8	FDG2JK156G402GL5
550	15	32.0	37.0	22.0	27.5	10.2	13.0	900	5.5	28	8.1	60	1.2	FDG2JK156G404GB5
550	15	42.5	18.0	24.0	37.5	\	10.5	900	6.5	28	8.3	60	1.0	FDG2JK156K302KL5
550	20	42.5	40.0	20.0	37.5	10.2	12.5	700	6.5	30	9.8	35	1.2	FDG2JK206K244KB5
550	22	42.5	40.0	20.0	37.5	10.2	13.5	770	6.5	30	8.4	35	1.2	FDG2JK226K244KB5
550	25	42.5	40.0	20.0	37.5	10.2	14.5	875	6.5	30	7.3	35	1.2	FDG2JK256K244KB5
550	30	42.5	44.0	24.0	37.5	10.2	16.0	1050	6.0	30	6.5	35	1.2	FDG2JK306K324KB5
550	35	42.5	45.0	30.0	37.5	20.3	18.0	1225	6.0	30	5.1	35	1.2	FDG2JK356K424KD5
550	40	42.5	45.0	30.0	37.5	20.3	18.0	1400	5.5	30	5.1	35	1.2	FDG2JK406K424KD5
550	40	57.5	22.0	43.0	52.5	20.3	16.0	1400	5.8	30	5.2	35	1.2	FDG2JK406M304MD5
550	50	42.5	50.0	35.0	37.5	20.3	20.0	1750	5.0	30	5.0	35	1.2	FDG2JK506K474KD5

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## DC-Link Applications

### FDG series

#### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
550	60	57.5	45.0	30.0	52.5	20.3	18.0	1200	4.8	35	6.2	20	1.2	FDG2JK606M164MD5
550	75	57.5	50.0	35.0	52.5	20.3	20.0	1500	5.0	35	5.0	20	1.2	FDG2JK756M204MD5
550	100	57.5	55.0	45.0	52.5	20.3	24.0	2000	4.5	35	3.9	20	1.2	FDG2JK107M324MD5
550	110	57.5	55.0	45.0	52.5	20.3	26.0	2200	4.0	35	3.7	20	1.2	FDG2JK117M324MD5
550	130	57.5	60.0	35.0	52.5	20.3	23.0	2600	3.4	35	5.4	20	1.2	FDG2JK137M224MD5
550	140	57.5	65.0	35.0	52.5	20.3	25.0	2800	3.3	35	5.3	20	1.2	FDG2JK147M234MD5
550	150	57.5	70.0	35.0	52.5	20.3	27.0	3000	3.1	35	5.0	20	1.2	FDG2JK157M244MD5
550	160	57.5	80.0	35.0	52.5	20.3	29.0	3200	3.0	35	4.8	20	1.2	FDG2JK167M254MD5
550	170	57.5	80.0	35.0	52.5	20.3	32.0	3400	2.8	35	4.7	20	1.2	FDG2JK177M254MD5
600	3.0	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDG2KK305G182GL5
600	4.0	32.0	20.0	11.0	27.5	\	5.0	240	26.0	25	14.3	60	0.8	FDG2KK405G182GL5
600	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.5	25	26.5	60	0.8	FDG2KK505G262GL5
600	8.0	32.0	28.0	14.0	27.5	\	7.5	480	12.0	25	17.8	60	0.8	FDG2KK805G262GL5
600	10	32.0	33.0	18.0	27.5	\	8.5	600	7.5	25	19.8	60	0.8	FDG2KK106G342GL5
600	12	32.0	33.0	18.0	27.5	\	9.5	720	7.5	25	15.8	60	0.8	FDG2KK126G342GL5
600	12	42.5	18.0	24.0	37.5	\	8.0	420	9.5	25	16.8	35	1.0	FDG2KK126K302KL5
600	15	32.0	37.0	22.0	27.5	\	10.5	900	7.5	28	12.1	60	0.8	FDG2KK156G402GL5
600	15	42.5	18.0	24.0	37.5	\	12.0	525	6.0	28	16.2	35	1.0	FDG2KK156K302KL5
600	20	42.5	40.0	20.0	37.5	10.2	11.0	700	6.0	30	13.8	35	1.2	FDG2KK206K244KB5
600	30	42.5	37.0	28.0	37.5	10.2	13.0	1050	5.5	30	10.8	35	1.2	FDG2KK306K374KB5
600	35	42.5	44.0	24.0	37.5	10.2	16.5	1225	5.0	30	8.5	35	1.2	FDG2KK356K324KB5
600	35	57.5	22.0	43.0	52.5	20.3	13.5	700	5.5	30	10.7	20	1.2	FDG2KK356M304MD5
600	40	42.5	45.0	30.0	37.5	20.3	18.0	1400	4.0	30	7.7	35	1.2	FDG2KK406K424KD5
600	50	57.5	50.0	35.0	52.5	20.3	14.0	1000	6.5	35	7.8	20	1.2	FDG2KK506M204MD5
600	60	57.5	50.0	35.0	52.5	20.3	16.0	1200	5.0	35	7.8	20	1.2	FDG2KK606M204MD5
600	70	57.5	50.0	35.0	52.5	20.3	18.0	1400	5.0	35	6.2	20	1.2	FDG2KK706M204MD5
600	80	57.5	55.0	45.0	52.5	20.3	20.0	1600	4.0	35	6.3	20	1.2	FDG2KK806M324MD5
600	90	57.5	55.0	45.0	52.5	20.3	24.0	1800	4.0	35	4.3	20	1.2	FDG2KK906M324MD5
600	100	57.5	53.0	50.0	52.5	20.3	26.0	2000	4.0	35	3.7	20	1.2	FDG2KK107M354MD5
600	110	57.5	53.0	50.0	52.5	20.3	28.0	2200	3.5	35	3.6	20	1.2	FDG2KK117M354MD5
600	120	57.5	60.0	35.0	52.5	20.3	30.0	2400	3.4	35	3.5	20	1.2	FDG2KK127M224MD5
600	130	57.5	65.0	35.0	52.5	20.3	32.0	2600	3.3	35	3.4	20	1.2	FDG2KK137M234MD5
600	140	57.5	70.0	35.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDG2KK147M244MD5
600	140	57.5	65.0	45.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDG2KK147M344MD5
600	150	57.5	80.0	35.0	52.5	20.3	36.0	3000	3.0	35	3.3	20	1.2	FDG2KK157M254MD5
700	1.0	32.0	18.0	9.0	27.5	\	2.5	60	54.0	25	50.6	60	0.8	FDG2MK105G152GL5
700	2.0	32.0	18.0	9.0	27.5	\	3.0	120	35.0	25	49.5	60	0.8	FDG2MK205G152GL5
700	3.0	32.0	20.0	11.0	27.5	\	4.5	180	28.0	25	47.0	60	0.8	FDG2MK305G182GL5
700	3.3	32.0	28.0	14.0	27.5	\	5.5	198	26.0	25	31.5	60	0.8	FDG2MK335G262GL5
700	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.0	25	26.5	60	0.8	FDG2MK505G262GL5
700	6.0	32.0	28.0	18.0	27.5	\	6.0	360	14.0	25	16.9	60	0.8	FDG2MK605G332GL5
700	8.0	32.0	33.0	18.0	27.5	\	9.0	480	10.0	25	12.3	60	0.8	FDG2MK805G342GL5
700	10	32.0	33.0	18.0	27.5	\	10.0	600	7.0	25	14.3	60	0.8	FDG2MK106G342GL5
700	10	32.0	37.0	22.0	27.5	\	12.0	600	6.5	28	10.7	60	0.8	FDG2MK106G402GL5
700	10	42.5	18.0	24.0	37.5	\	11.5	350	7.5	30	10.1	35	1.0	FDG2MK106K302KL5
700	12	32.0	37.0	22.0	27.5	\	12.5	720	6.0	28	9.2	60	0.8	FDG2MK126G402GL5

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## FDG series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
700	12	42.5	18.0	24.0	37.5	\	12.0	420	7.0	30	9.8	35	1.0	FDG2MK126K302KL5
700	15	42.5	33.5	22.0	37.5	\	9.0	525	9.0	30	13.7	35	1.0	FDG2MK156K262KL5
700	15	42.5	33.5	22.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDG2MK156K264KB5
700	15	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDG2MK156K244KB5
700	20	42.5	37.0	28.0	37.5	10.2	12.0	700	7.5	30	11.6	35	1.2	FDG2MK206K374KB5
700	22	42.5	44.0	24.0	37.5	10.2	14.0	770	6.5	30	9.3	35	1.2	FDG2MK226K324KB5
700	25	42.5	44.0	24.0	37.5	10.2	16.0	875	6.0	30	7.8	35	1.2	FDG2MK256K324KB5
700	30	42.5	45.0	30.0	37.5	20.3	16.0	1050	5.8	30	8.7	35	1.2	FDG2MK306K424KD5
700	30	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	9.8	20	1.2	FDG2MK306M304MD5
700	35	42.5	50.0	35.0	37.5	20.3	20.0	1225	5.5	30	6.3	35	1.2	FDG2MK356K474KD5
700	40	57.5	45.0	30.0	52.5	20.3	14.0	800	5.0	35	8.5	20	1.2	FDG2MK406M164MD5
700	45	57.5	45.0	30.0	52.5	20.3	15.5	900	5.0	35	7.6	20	1.2	FDG2MK456M164MD5
700	50	57.5	50.0	35.0	52.5	20.3	15.0	1000	4.8	35	8.1	20	1.2	FDG2MK506M204MD5
700	55	57.5	50.0	35.0	52.5	20.3	16.0	1100	4.5	35	8.7	20	1.2	FDG2MK556M204MD5
700	60	57.5	50.0	35.0	52.5	20.3	18.0	1200	4.0	35	7.7	20	1.2	FDG2MK606M204MD5
700	65	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDG2MK656M324MD5
700	70	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDG2MK706M324MD5
700	75	57.5	55.0	45.0	52.5	20.3	20.0	1500	3.8	35	6.3	20	1.2	FDG2MK756M324MD5
700	80	57.5	55.0	45.0	52.5	20.3	22.0	1600	3.5	35	5.9	20	1.2	FDG2MK806M324MD5
700	80	57.5	60.0	35.0	52.5	20.3	23.0	1600	3.4	35	5.8	20	1.2	FDG2MK806M224MD5
700	90	57.5	55.0	45.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDG2MK906M324MD5
700	90	57.5	60.0	35.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDG2MK906M224MD5
700	100	57.5	65.0	35.0	52.5	20.3	26.0	2000	3.5	35	5.9	20	1.2	FDG2MK107M234MD5
700	110	57.5	70.0	35.0	52.5	20.3	28.0	2200	3.4	35	5.8	20	1.2	FDG2MK117M244MD5
700	120	57.5	80.0	35.0	52.5	20.3	30.0	2400	3.0	35	5.6	20	1.2	FDG2MK127M254MD5
700	130	57.5	65.0	45.0	52.5	20.3	32.0	2600	2.8	35	5.4	20	1.2	FDG2MK137M344MD5
800	1.0	32.0	18.0	9.0	27.5	\	2.0	60	62.0	25	45.7	60	0.8	FDG2NK105G152GL5
800	2.0	32.0	20.0	11.0	27.5	\	3.5	120	31.0	25	42.5	60	0.8	FDG2NK205G182GL5
800	3.0	32.0	22.0	13.0	27.5	\	4.5	180	21.0	25	35.4	60	0.8	FDG2NK305G212GL5
800	3.3	32.0	28.0	14.0	27.5	\	4.0	198	25.0	25	32.1	60	0.8	FDG2NK335G262GL5
800	5.0	32.0	28.0	14.0	27.5	\	6.0	300	12.0	25	26.5	60	0.8	FDG2NK505G262GL5
800	6.0	32.0	28.0	18.0	27.5	\	7.5	360	10.5	25	18.6	60	0.8	FDG2NK605G332GL5
800	8.0	32.0	33.0	18.0	27.5	\	9.5	480	9.5	25	14.3	60	0.8	FDG2NK805G342GL5
800	9	32.0	33.0	18.0	27.5	\	10.0	540	8.5	25	9.1	60	0.8	FDG2NK905G342GL5
800	10	32.0	37.0	22.0	27.5	\	11.5	600	9.5	28	8.0	60	0.8	FDG2NK106G402GL5
800	10	42.5	32.0	19.0	37.5	\	8.0	350	12.5	30	15.8	35	1.0	FDG2NK106K212KL5
800	15	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDG2NK156K244KB5
800	20	42.5	37.0	28.0	37.5	10.2	12.0	700	7.0	30	11.6	35	1.2	FDG2NK206K374KB5
800	20	42.5	44.0	24.0	37.5	10.2	13.5	700	6.5	30	11.8	35	1.2	FDG2NK206K324KB5
800	22	42.5	44.0	24.0	37.5	10.2	14.0	770	6.0	30	9.3	35	1.2	FDG2NK226K324KB5
800	25	42.5	45.0	30.0	37.5	20.3	14.0	875	5.5	30	7.5	35	1.2	FDG2NK256K424KD5
800	30	42.5	45.0	30.0	37.5	20.3	16.0	1050	4.5	30	8.7	35	1.2	FDG2NK306K424KD5
800	35	57.5	45.0	30.0	52.5	20.3	14.2	700	6.5	35	7.6	20	1.2	FDG2NK356M164MD5
800	40	57.5	45.0	30.0	52.5	20.3	14.0	800	6.0	35	8.5	20	1.2	FDG2NK406M164MD5
800	45	57.5	45.0	30.0	52.5	20.3	15.5	900	5.5	35	7.6	20	1.2	FDG2NK456M164MD5
800	47	57.5	50.0	35.0	52.5	20.3	17.5	940	5.0	35	6.5	20	1.2	FDG2NK476M204MD5

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# Metallized Polypropylene Film Capacitor (Radial Lead, THB\* compliance)

## DC-Link Applications

### FDG series

#### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
800	50	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	20	1.2	FDG2NK506M204MD5
800	55	57.5	50.0	35.0	52.5	20.3	17.0	1100	4.6	35	6.9	20	1.2	FDG2NK556M204MD5
800	65	57.5	60.0	35.0	52.5	20.3	19.0	1300	4.0	35	7.3	20	1.2	FDG2NK656M224MD5
800	65	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDG2NK656M324MD5
800	70	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDG2NK706M324MD5
800	70	57.5	60.0	35.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDG2NK706M224MD5
800	75	57.5	55.0	45.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDG2NK756M324MD5
800	75	57.5	65.0	35.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDG2NK756M234MD5
800	80	57.5	65.0	45.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDG2NK806M344MD5
800	80	57.5	70.0	35.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDG2NK806M244MD5
800	90	57.5	65.0	45.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDG2NK906M344MD5
800	90	57.5	80.0	35.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDG2NK906M254MD5
800	100	57.5	65.0	45.0	52.5	20.3	28.0	2000	3.2	35	4.8	20	1.2	FDG2NK107M344MD5
900	1.0	32.0	18.0	9.0	27.5	\	2.0	60	63.0	25	46.8	60	0.8	FDG2QK105G152GL5
900	2.0	32.0	20.0	11.0	27.5	\	3.0	120	25.0	25	44.4	60	0.8	FDG2QK205G182GL5
900	3.0	32.0	22.0	13.0	27.5	\	5.0	180	18.5	25	21.6	60	0.8	FDG2QK305G212GL5
900	3.3	32.0	24.5	15.0	27.5	\	5.0	198	18.5	25	21.6	60	0.8	FDG2QK335G272GL5
900	5.0	32.0	28.0	18.0	27.5	\	7.0	300	12.5	25	16.3	60	0.8	FDG2QK505G332GL5
900	6.0	32.0	33.0	18.0	27.5	\	8.0	360	11.0	25	14.2	60	0.8	FDG2QK605G342GL5
900	8.0	32.0	37.0	22.0	27.5	\	10.5	480	10.0	28	9.1	60	0.8	FDG2QK805G402GL5
900	10	32.0	37.0	22.0	27.5	\	12.0	600	10.0	28	6.9	60	0.8	FDG2QK106G402GL5
900	10	42.5	40.0	20.0	37.5	\	8.5	350	12.0	30	11.5	35	1.0	FDG2QK106K242KL5
900	10	42.5	40.0	20.0	37.5	10.2	9.5	350	11.5	30	9.6	35	1.2	FDG2QK106K244KB5
900	15	42.5	44.0	24.0	37.5	\	10.5	525	8.0	30	11.3	35	1.0	FDG2QK156K322KL5
900	15	42.5	44.0	24.0	37.5	10.2	12.0	525	7.5	30	9.3	35	1.2	FDG2QK156K324KB5
900	18	42.5	44.0	24.0	37.5	\	10.5	630	8.0	30	11.3	35	1.0	FDG2QK186K322KL5
900	18	42.5	44.0	24.0	37.5	10.2	12.0	630	7.5	30	9.3	35	1.2	FDG2QK186K324KB5
900	20	42.5	45.0	30.0	37.5	\	14.0	700	6.0	30	8.5	35	1.0	FDG2QK206K422KL5
900	20	42.5	45.0	30.0	37.5	20.3	15.0	700	5.5	30	8.1	35	1.2	FDG2QK206K424KD5
900	20	57.5	22.0	43.0	52.5	20.3	12.0	400	8.6	30	10.5	20	1.2	FDG2QK206M304MD5
900	25	42.5	45.0	30.0	37.5	20.3	17.0	875	5.5	30	6.3	35	1.2	FDG2QK256K424KD5
900	30	42.5	50.0	35.0	37.5	20.3	19.0	1200	5.0	30	5.5	40	1.2	FDG2QK306K474KD5
900	30	57.5	45.0	30.0	52.5	20.3	15.0	600	5.5	35	8.1	20	1.2	FDG2QK306M164MD5
900	35	57.5	50.0	35.0	52.5	20.3	15.5	700	5.5	35	7.6	20	1.2	FDG2QK356M204MD5
900	40	57.5	50.0	35.0	52.5	20.3	16.0	800	6.5	35	6.0	20	1.2	FDG2QK406M204MD5
900	50	57.5	50.0	35.0	52.5	20.3	18.0	1000	3.6	35	8.6	20	1.2	FDG2QK506M204MD5
900	55	57.5	60.0	35.0	52.5	20.3	19.0	1100	3.5	35	7.9	20	1.2	FDG2QK556M224MD5
900	55	57.5	55.0	45.0	52.5	20.3	20.0	1100	3.4	35	7.4	20	1.2	FDG2QK556M324MD5
900	60	57.5	55.0	45.0	52.5	20.3	20.0	1200	3.4	35	7.4	20	1.2	FDG2QK606M324MD5
900	65	57.5	70.0	35.0	52.5	20.3	22.0	1300	3.3	35	7.0	20	1.2	FDG2QK656M244MD5
900	70	57.5	55.0	45.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDG2QK706M324MD5
900	70	57.5	80.0	35.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDG2QK706M254MD5
900	80	57.5	65.0	45.0	52.5	20.3	25.0	1600	3.2	35	6.7	20	1.2	FDG2QK806M344MD5
1000	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDG3KK105G182GL5
1000	2.0	32.0	22.0	13.0	27.5	\	3.5	160	30.0	25	27.2	80	0.8	FDG3KK205G212GL5
1000	3.0	32.0	24.5	15.0	27.5	\	5.0	240	25.0	25	16.0	80	0.8	FDG3KK305G272GL5

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# Metallized Polypropylene Film Capacitor (Radial Lead, THB\* compliance)

## DC-Link Applications

### FDG series

#### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
1000	5.0	32.0	33.0	18.0	27.5	\	8.0	400	14.0	25	11.2	80	0.8	FDG3KK505G342GL5
1000	8.0	32.0	37.0	22.0	27.5	\	10.0	640	12.0	28	8.3	80	0.8	FDG3KK805G402GL5
1000	10	42.5	40.0	20.0	37.5	\	8.5	400	12.0	30	11.5	40	1.0	FDG3KK106K242KL5
1000	10	42.5	40.0	20.0	37.5	10.2	9.5	400	11.5	30	9.6	40	1.2	FDG3KK106K244KB5
1000	12	42.5	44.0	24.0	37.5	10.2	10.5	480	9.0	30	10.1	40	1.2	FDG3KK126K324KB5
1000	15	42.5	44.0	24.0	37.5	\	10.5	600	8.0	30	11.3	40	1.0	FDG3KK156K322KL5
1000	15	42.5	44.0	24.0	37.5	10.2	12.0	600	7.5	30	9.3	40	1.2	FDG3KK156K324KB5
1000	15	42.5	45.0	30.0	37.5	20.3	14.0	600	7.5	30	6.8	40	1.2	FDG3KK156K424KD5
1000	15	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	7.9	40	1.2	FDG3KK156M304MD5
1000	20	42.5	45.0	30.0	37.5	20.3	15.0	800	6.5	30	6.8	40	1.2	FDG3KK206K424KD5
1000	25	42.5	50.0	35.0	37.5	20.3	18.0	1000	5.5	30	5.6	40	1.2	FDG3KK256K474KD5
1000	30	57.5	45.0	30.0	52.5	20.3	15.0	750	5.5	35	8.1	25	1.2	FDG3KK306M164MD5
1000	35	57.5	50.0	35.0	52.5	20.3	16.0	875	5.5	35	7.1	25	1.2	FDG3KK356M204MD5
1000	40	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	25	1.2	FDG3KK406M204MD5
1000	40	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.0	35	7.6	25	1.2	FDG3KK406M324MD5
1000	50	57.5	55.0	45.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDG3KK506M324MD5
1000	50	57.5	65.0	35.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDG3KK506M234MD5
1000	55	57.5	70.0	35.0	52.5	20.3	20.0	1375	4.4	35	6.1	25	1.2	FDG3KK556M244MD5
1000	60	57.5	80.0	35.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDG3KK606M254MD5
1000	60	57.5	65.0	45.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDG3KK606M344MD5
1100	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDG3MK105G182GL5
1100	1.5	32.0	22.0	13.0	27.5	\	3.5	120	30.0	25	27.2	80	0.8	FDG3MK155G212GL5
1100	2.0	32.0	24.5	15.0	27.5	\	4.0	160	25.0	25	25.0	80	0.8	FDG3MK205G272GL5
1100	2.2	32.0	28.0	14.0	27.5	\	5.0	176	16.5	25	24.2	80	0.8	FDG3MK225G262GL5
1100	3.3	32.0	28.0	18.0	27.5	\	6.5	264	11.5	25	20.6	80	0.8	FDG3MK335G332GL5
1100	4.0	32.0	33.0	18.0	27.5	\	8.0	320	10.5	25	14.9	80	0.8	FDG3MK405G342GL5
1100	5.0	32.0	37.0	22.0	27.5	\	8.5	400	9.5	28	14.6	80	0.8	FDG3MK505G402GL5
1100	6.8	42.5	33.5	22.0	37.5	10.2	12.0	272	13.5	30	5.1	40	1.2	FDG3MK685K264KB5
1100	8.0	42.5	40.0	20.0	37.5	\	10.5	320	14.0	30	6.5	40	1.0	FDG3MK805K242KL5
1100	8.0	42.5	40.0	20.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDG3MK805K244KB5
1100	8.0	42.5	37.0	22.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDG3MK805K274KB5
1100	9.0	42.5	37.0	22.0	37.5	10.2	12.8	360	12.2	30	5.0	40	1.2	FDG3MK905K274KB5
1100	10	42.5	44.0	24.0	37.5	\	14.0	400	9.0	30	5.7	40	1.0	FDG3MK106K322KL5
1100	10	42.5	44.0	24.0	37.5	10.2	15.0	400	8.5	30	5.2	40	1.2	FDG3MK106K324KB5
1100	12	42.5	45.0	30.0	37.5	20.3	15.5	480	7.5	30	5.5	40	1.2	FDG3MK126K424KD5
1100	15	42.5	45.0	30.0	37.5	20.3	16.0	600	7.0	30	5.4	40	1.2	FDG3MK156K424KD5
1100	18	42.5	50.0	35.0	37.5	20.3	15.5	720	7.5	30	5.5	40	1.2	FDG3MK186K474KD5
1100	20	42.5	50.0	35.0	37.5	20.3	16.5	800	7.2	35	5.5	40	1.2	FDG3MK206K474KD5
1100	20	57.5	45.0	30.0	52.5	20.3	12.0	500	8.5	35	8.2	25	1.2	FDG3MK206M164MD5
1100	25	57.5	50.0	35.0	52.5	20.3	13.0	625	8.2	35	8.0	25	1.2	FDG3MK256M204MD5
1100	30	57.5	50.0	35.0	52.5	20.3	15.0	750	5.0	35	8.9	25	1.2	FDG3MK306M204MD5
1100	35	57.5	60.0	35.0	52.5	20.3	16.0	875	4.9	35	8.7	25	1.2	FDG3MK356M224MD5
1100	40	57.5	65.0	35.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDG3MK406M234MD5
1100	40	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDG3MK406M324MD5
1100	45	57.5	70.0	35.0	52.5	20.3	18.0	1125	5.4	35	6.2	25	1.2	FDG3MK456M244MD5
1100	50	57.5	65.0	45.0	52.5	20.3	19.5	1250	5.2	35	5.8	25	1.2	FDG3MK506M344MD5

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# Metallized Polypropylene Film Capacitor (Radial Lead, THB\* compliance) DC-Link Applications

## FDG series

### ■ Technical data

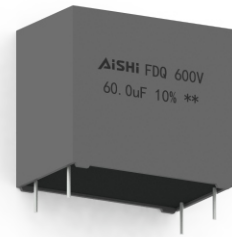
Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
1200	1.0	32.0	20.0	11.0	27.5	\	4.5	90	32.5	25	15.2	90	0.8	FDG3BK105G182GL5
1200	2.0	32.0	24.5	15.0	27.5	\	5.0	180	32.5	25	12.3	90	0.8	FDG3BK205G272GL5
1200	2.2	32.0	28.0	18.0	27.5	\	5.5	198	17.0	25	19.4	90	0.8	FDG3BK225G332GL5
1200	3.0	32.0	28.0	18.0	27.5	\	7.0	270	16.0	25	12.8	90	0.8	FDG3BK305G332GL5
1200	3.3	32.0	33.0	18.0	27.5	\	8.0	297	13.5	25	11.6	90	0.8	FDG3BK335G342GL5
1200	5.0	32.0	37.0	22.0	27.5	\	10.0	450	12.0	28	8.3	90	0.8	FDG3BK505G402GL5
1200	5.0	42.5	33.5	22.0	37.5	\	7.5	225	15.5	30	11.5	45	1.0	FDG3BK505K262KL5
1200	6.0	42.5	40.0	20.0	37.5	\	7.5	270	15.5	30	11.5	45	1.0	FDG3BK605K242KL5
1200	7.0	42.5	37.0	22.0	37.5	10.2	8.0	315	15.2	30	11.0	45	1.2	FDG3BK705K274KB5
1200	8.0	42.5	44.0	24.0	37.5	10.2	9.0	360	12.5	30	9.9	45	1.2	FDG3BK805K324KB5
1200	10	42.5	44.0	24.0	37.5	10.2	10.0	450	10.5	30	9.5	45	1.2	FDG3BK106K324KB5
1200	10	42.5	45.0	30.0	37.5	20.3	12.0	450	8.0	30	8.7	45	1.2	FDG3BK106K424KD5
1200	15	42.5	50.0	35.0	37.5	20.3	15.0	675	6.5	30	6.8	45	1.2	FDG3BK156K474KD5
1200	20	57.5	45.0	30.0	52.5	20.3	13.0	600	8.5	35	9.7	30	1.2	FDG3BK206M164MD5
1200	25	57.5	50.0	35.0	52.5	20.3	15.0	750	6.5	35	9.1	30	1.2	FDG3BK256M204MD5
1200	30	57.5	55.0	45.0	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDG3BK306M324MD5
1200	30	57.5	60.0	35.0	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDG3BK306M224MD5
1200	35	57.5	55.0	45.0	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDG3BK356M324MD5
1200	35	57.5	70.0	35.0	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDG3BK356M244MD5
1200	40	57.5	65.0	45.0	52.5	20.3	20.0	1200	4.5	35	5.6	30	1.2	FDG3BK406M344MD5
1200	45	57.5	65.0	45.0	52.5	20.3	22.0	1350	4.3	35	5.5	30	1.2	FDG3BK456M344MD5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor

## FDQ series



### Overview

The FDQ series is constructed of metallized polypropylene film with rectangular plastic box filled with resin and 2 or 4 tinned copper wires. These FDQ series qualified in accordance to AEC-Q200 requirement.

### Applications

- High performance DC filtering
- Frequency converters
- Industrial power supplies and motor drives
- Renewable energy inverters
- Energy storage
- OBC and Automotive Applications

### Features

- Automotive Grade (AEC-Q200)
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

### Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071, AEC-Q200D
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C (+85°C observing voltage must be de-rating at 1.35% per °C)
Upper Temperature Tmax	+85°C IEC 61071, Endurance Test Temperature
Lower Temperature Tmin	-40°C
Rated Voltage	450Vdc ~ 1200Vdc
Capacitance Range	1.0μF ~ 400μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	<= 0.002 (0.20%) at 1 KHz. C ≤20μF at +25°C <= 0.003 (0.30%) at 1 KHz. C >20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10 sec at +25°C
Insulation Resistance	IR x C ≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C±2°C Relative humidity (RH) :93% ±2% Test duration: 56 days Capacitance change: ≤5% DF change (Δtgδ): ≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +85°C±2°C Voltage applied: 1.3 X V <sub>R</sub> (d.c.) Test duration: 1000 hours Capacitance change: ≤5% DF change (Δtgδ): ≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C±2°C Relative humidity (RH) :85% ±2% Loading Voltage: Rate voltage (DC); Test duration: 1000 hours Capacitance change: ≤5%



# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor

## FDQ series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
450	1.0	32.0	18.0	9.0	27.5	\	2.5	75	54.0	25	44.4	75	0.8	FDQ2WK105G152GL5
450	2.0	32.0	18.0	9.0	27.5	\	3.0	150	34.5	25	48.3	75	0.8	FDQ2WK205G152GL5
450	3.0	32.0	20.0	11.0	27.5	\	4.0	225	23.0	25	40.8	75	0.8	FDQ2WK305G182GL5
450	4.0	32.0	20.0	11.0	27.5	\	4.0	300	20.5	25	45.7	75	0.8	FDQ2WK405G182GL5
450	5.0	32.0	22.0	13.0	27.5	\	5.0	375	16.5	25	36.4	75	0.8	FDQ2WK505G212GL5
450	6.0	32.0	24.5	15.0	27.5	\	6.0	450	13.5	25	30.9	75	0.8	FDQ2WK605G272GL5
450	7.0	32.0	24.5	15.0	27.5	\	6.5	525	11.5	25	30.9	75	0.8	FDQ2WK705G272GL5
450	8.0	32.0	28.0	18.0	27.5	\	8.5	600	8.5	25	24.4	75	0.8	FDQ2WK805G332GL5
450	9.0	32.0	28.0	18.0	27.5	\	8.5	675	9.0	25	23.1	75	0.8	FDQ2WK905G332GL5
450	10	32.0	28.0	18.0	27.5	\	9.0	750	8.0	25	23.1	75	0.8	FDQ2WK106G332GL5
450	10	42.5	36.0	19.0	37.5	10.2	8.0	400	12.0	30	19.5	40	1.2	FDQ2WK106K224KB5
450	12	32.0	31.0	21.0	27.5	\	10.0	900	7.0	25	21.4	75	0.8	FDQ2WK126G372GL5
450	12	42.5	36.0	19.0	37.5	10.2	8.5	480	10.0	30	20.8	40	1.2	FDQ2WK126K224KB5
450	15	32.0	35.0	20.0	27.5	\	11.5	1125	6.0	25	18.9	75	0.8	FDQ2WK156G572GL5
450	15	42.5	36.0	19.0	37.5	10.2	10.0	600	8.0	30	18.8	40	1.2	FDQ2WK156K224KB5
450	20	42.5	38.0	20.0	37.5	10.2	12.0	800	6.0	30	17.4	40	1.2	FDQ2WK206K234KB5
450	22	42.5	38.0	20.0	37.5	10.2	11.5	880	6.5	30	17.4	40	1.2	FDQ2WK226K234KB5
450	25	42.5	38.0	20.0	37.5	10.2	12.5	1000	5.5	30	17.5	40	1.2	FDQ2WK256K234KB5
450	30	42.5	44.0	24.0	37.5	10.2	15.0	1200	4.5	30	14.8	40	1.2	FDQ2WK306K324KB5
450	35	42.5	45.0	30.0	37.5	20.3	18.5	1400	3.5	30	12.5	40	1.2	FDQ2WK356K424KD5
450	40	42.5	45.0	30.0	37.5	20.3	18.5	1600	3.5	30	12.5	40	1.2	FDQ2WK406K424KD5
450	40	57.5	45.0	25.0	52.5	10.2	13.5	800	6.0	35	13.7	20	1.2	FDQ2WK406M104MB5
450	45	57.5	45.0	25.0	52.5	10.2	13.5	900	6.0	35	13.7	20	1.2	FDQ2WK456M104MB5
450	50	57.5	45.0	30.0	52.5	20.3	15.5	1000	5.0	35	12.5	20	1.2	FDQ2WK506M164MD5
450	55	57.5	45.0	30.0	52.5	20.3	15.5	1100	5.0	35	12.5	20	1.2	FDQ2WK556M164MD5
450	60	57.5	45.0	30.0	52.5	20.3	16.5	1200	4.5	35	12.2	20	1.2	FDQ2WK606M164MD5
450	65	57.5	50.0	35.0	52.5	20.3	20.5	1300	3.5	35	10.2	20	1.2	FDQ2WK656M204MD5
450	70	57.5	50.0	35.0	52.5	20.3	19.0	1400	4.0	35	10.4	20	1.2	FDQ2WK706M204MD5
450	75	57.5	50.0	35.0	52.5	20.3	20.5	1500	3.5	35	10.2	20	1.2	FDQ2WK756M204MD5
450	80	57.5	50.0	35.0	52.5	20.3	20.5	1600	3.5	35	10.2	20	1.2	FDQ2WK806M204MD5
450	90	57.5	45.0	45.0	52.5	20.3	21.5	1800	3.0	35	10.8	20	1.2	FDQ2WK906M314MD5
450	95	57.5	45.0	45.0	52.5	20.3	21.5	1900	3.0	35	10.8	20	1.2	FDQ2WK956M314MD5
450	100	57.5	45.0	45.0	52.5	20.3	23.5	2000	2.5	35	10.9	20	1.2	FDQ2WK107M314MD5
450	200	57.5	65.0	70.0	52.5	20.3	30.5	4000	2.0	35	8.1	20	1.2	FDQ2WK207M436MD5
450	400	57.5	65.0	130.0	52.5	20.3	50.5	8000	1.5	35	3.9	20	1.2	FDQ2WK407M54EMD5
700	1.0	32.0	18.0	9.0	27.5	\	2.5	75	54.0	25	44.4	75	0.8	FDQ2MK105G152GL5
700	2.0	32.0	18.0	9.0	27.5	\	3.0	150	34.5	25	48.3	75	0.8	FDQ2MK205G152GL5
700	3.0	32.0	20.0	11.0	27.5	\	4.0	225	23.0	25	40.8	75	0.8	FDQ2MK305G182GL5
700	4.0	32.0	22.0	13.0	27.5	\	5.0	300	17.0	25	35.3	75	0.8	FDQ2MK405G212GL5
700	5.0	32.0	24.5	15.0	27.5	\	6.0	375	14.0	25	29.8	75	0.8	FDQ2MK505G272GL5
700	6.0	32.0	28.0	18.0	27.5	\	7.5	450	11.5	25	23.2	75	0.8	FDQ2MK605G332GL5
700	7.0	32.0	28.0	18.0	27.5	\	8.0	525	10.0	25	23.4	75	0.8	FDQ2MK705G332GL5
700	8.0	32.0	28.0	18.0	27.5	\	8.5	600	8.5	25	24.4	75	0.8	FDQ2MK805G332GL5
700	9.0	32.0	31.0	21.0	27.5	\	10.0	675	7.5	25	20.0	75	0.8	FDQ2MK905G372GL5
700	10	32.0	31.0	21.0	27.5	\	10.0	750	7.0	25	21.4	75	0.8	FDQ2MK106G372GL5
700	10	42.5	36.0	19.0	37.5	10.2	8.0	400	12.0	30	19.5	40	1.2	FDQ2MK106K224KB5

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# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor

## FDQ series

### Technical data

Vdc	Cap Value μF	Dimensions					I <sub>rms</sub> 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
700	12	32.0	35.0	20.0	27.5	\	11.5	900	6.0	25	18.9	75	0.8	FDQ2MK126G572GL5
700	12	42.5	36.0	19.0	37.5	10.2	8.5	480	10.0	30	20.8	40	1.2	FDQ2MK126K224KB5
700	15	42.5	36.0	19.0	37.5	10.2	10.0	600	8.0	30	18.8	40	1.2	FDQ2MK156K224KB5
700	20	42.5	38.0	20.0	37.5	10.2	12.0	800	6.0	30	17.4	40	1.2	FDQ2MK206K234KB5
700	22	42.5	44.0	24.0	37.5	10.2	13.5	880	5.5	30	15.0	40	1.2	FDQ2MK226K324KB5
700	25	42.5	44.0	24.0	37.5	10.2	14.5	1000	5.0	30	14.3	40	1.2	FDQ2MK256K324KB5
700	30	42.5	45.0	30.0	37.5	20.3	17.0	1200	4.0	30	13.0	40	1.2	FDQ2MK306K424KD5
700	30	57.5	45.0	25.0	52.5	10.2	12.0	600	8.0	35	13.0	20	1.2	FDQ2MK306M104MB5
700	35	42.5	45.0	30.0	37.5	20.3	18.5	1400	3.5	30	12.5	40	1.2	FDQ2MK356K424KD5
700	35	57.5	45.0	25.0	52.5	10.2	12.5	700	7.0	35	13.7	20	1.2	FDQ2MK356M104MB5
700	40	57.5	45.0	25.0	52.5	10.2	13.5	800	6.0	35	13.7	20	1.2	FDQ2MK406M104MB5
700	45	57.5	45.0	30.0	52.5	20.3	15.0	900	5.5	35	12.1	20	1.2	FDQ2MK456M164MD5
700	50	57.5	45.0	30.0	52.5	20.3	15.5	1000	5.0	35	12.5	20	1.2	FDQ2MK506M164MD5
700	55	57.5	50.0	35.0	52.5	20.3	18.0	1100	4.5	35	10.3	20	1.2	FDQ2MK556M204MD5
700	60	57.5	50.0	35.0	52.5	20.3	19.0	1200	4.0	35	10.4	20	1.2	FDQ2MK606M204MD5
700	65	57.5	50.0	35.0	52.5	20.3	20.5	1300	3.5	35	10.2	20	1.2	FDQ2MK656M204MD5
700	70	57.5	45.0	45.0	52.5	20.3	20.0	1400	3.5	35	10.7	20	1.2	FDQ2MK706M314MD5
700	75	57.5	45.0	45.0	52.5	20.3	21.5	1500	3.0	35	10.8	20	1.2	FDQ2MK756M314MD5
700	80	57.5	45.0	45.0	52.5	20.3	21.5	1600	3.0	35	10.8	20	1.2	FDQ2MK806M314MD5
700	160	57.5	65.0	70.0	52.5	20.3	30.5	3200	2.5	35	6.4	20	1.2	FDQ2MK167M436MD5
700	320	57.5	65.0	130.0	52.5	20.3	54.0	6400	1.3	35	4.0	20	1.2	FDQ2MK327M54EMD5
800	1.0	32.0	18.0	9.0	27.5	\	2.0	75	62.5	25	60.0	75	0.8	FDQ2NK105G152GL5
800	2.0	32.0	20.0	11.0	27.5	\	3.5	150	31.0	25	39.5	75	0.8	FDQ2NK205G182GL5
800	3.0	32.0	22.0	13.0	27.5	\	4.5	225	21.0	25	35.3	75	0.8	FDQ2NK305G212GL5
800	4.0	32.0	24.5	15.0	27.5	\	5.5	300	15.5	25	32.0	75	0.8	FDQ2NK405G272GL5
800	5.0	32.0	28.0	18.0	27.5	\	7.0	375	12.5	25	24.5	75	0.8	FDQ2NK505G332GL5
800	6.0	32.0	28.0	18.0	27.5	\	7.5	450	10.5	25	25.4	75	0.8	FDQ2NK605G332GL5
800	7.0	32.0	31.0	21.0	27.5	\	9.0	525	9.0	25	20.6	75	0.8	FDQ2NK705G372GL5
800	8.0	32.0	31.0	21.0	27.5	\	9.5	600	8.0	25	20.8	75	0.8	FDQ2NK805G372GL5
800	9.0	32.0	35.0	20.0	27.5	\	10.0	675	8.0	25	18.8	75	0.8	FDQ2NK905G572GL5
800	10	42.5	36.0	19.0	37.5	10.2	8.5	400	11.0	30	18.9	40	1.2	FDQ2NK106K224KB5
800	12	42.5	36.0	19.0	37.5	10.2	9.0	480	9.0	30	20.6	40	1.2	FDQ2NK126K224KB5
800	15	42.5	38.0	20.0	37.5	10.2	11.0	600	7.5	30	16.5	40	1.2	FDQ2NK156K234KB5
800	20	42.5	44.0	24.0	37.5	10.2	13.5	800	5.5	30	15.0	40	1.2	FDQ2NK206K324KB5
800	22	42.5	45.0	30.0	37.5	20.3	15.5	880	5.0	30	12.5	40	1.2	FDQ2NK226K424KD5
800	25	42.5	45.0	30.0	37.5	20.3	16.0	1000	4.5	30	13.0	40	1.2	FDQ2NK256K424KD5
800	30	57.5	45.0	25.0	52.5	10.2	12.0	600	7.5	35	13.9	20	1.2	FDQ2NK306M104MB5
800	35	57.5	45.0	30.0	52.5	20.3	14.5	700	6.0	35	11.9	20	1.2	FDQ2NK356M164MD5
800	40	57.5	45.0	30.0	52.5	20.3	15.0	800	5.5	35	12.1	20	1.2	FDQ2NK406M164MD5
800	45	57.5	50.0	35.0	52.5	20.3	17.0	900	5.0	35	10.4	20	1.2	FDQ2NK456M204MD5
800	50	57.5	50.0	35.0	52.5	20.3	18.0	1000	4.5	35	10.3	20	1.2	FDQ2NK506M204MD5
800	55	57.5	45.0	45.0	52.5	20.3	18.5	1100	4.0	35	11.0	20	1.2	FDQ2NK556M314MD5
800	60	57.5	45.0	45.0	52.5	20.3	20.0	1200	3.5	35	10.7	20	1.2	FDQ2NK606M314MD5
800	120	57.5	65.0	70.0	52.5	20.3	27.0	2400	3.2	35	6.4	20	1.2	FDQ2NK127M436MD5
800	240	57.5	65.0	130.0	52.5	20.3	48.5	4800	1.6	35	4.0	20	1.2	FDQ2NK247M54EMD5
900	1.0	32.0	18.0	9.0	27.5	\	2.0	80	63.0	25	59.5	80	0.8	FDQ2QK105G152GL5

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# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor

## FDQ series

### Technical data

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
900	2.0	32.0	22.0	13.0	27.5	\	3.5	160	32.0	25	38.3	80	0.8	FDQ2QK205G212GL5
900	3.0	32.0	24.5	15.0	27.5	\	5.0	240	21.0	25	28.6	80	0.8	FDQ2QK305G272GL5
900	4.0	32.0	28.0	18.0	27.5	\	6.0	320	16.0	25	26.0	80	0.8	FDQ2QK405G332GL5
900	5.0	32.0	31.0	21.0	27.5	\	7.5	400	13.0	25	20.5	80	0.8	FDQ2QK505G372GL5
900	5.0	42.5	36.0	19.0	37.5	10.2	6.5	200	19.0	30	18.7	40	1.2	FDQ2QK505K224KB5
900	6.0	32.0	31.0	21.0	27.5	\	8.5	480	10.0	25	20.8	80	0.8	FDQ2QK605G372GL5
900	6.0	42.5	36.0	19.0	37.5	10.2	7.0	240	16.0	30	19.1	40	1.2	FDQ2QK605K224KB5
900	7.0	32.0	35.0	20.0	27.5	\	9.0	560	9.0	25	20.6	80	0.8	FDQ2QK705G572GL5
900	7.0	42.5	36.0	19.0	37.5	10.2	7.0	280	16.0	30	19.1	40	1.2	FDQ2QK705K224KB5
900	8.0	42.5	36.0	19.0	37.5	10.2	7.5	320	14.0	30	19.0	40	1.2	FDQ2QK805K224KB5
900	9.0	42.5	36.0	19.0	37.5	10.2	8.0	360	12.0	30	19.5	40	1.2	FDQ2QK905K224KB5
900	10	42.5	38.0	20.0	37.5	10.2	9.0	400	11.0	30	16.8	40	1.2	FDQ2QK106K234KB5
900	12	42.5	38.0	20.0	37.5	10.2	10.0	480	9.0	30	16.7	40	1.2	FDQ2QK126K234KB5
900	15	42.5	44.0	24.0	37.5	10.2	12.0	600	7.0	30	14.9	40	1.2	FDQ2QK156K324KB5
900	15	57.5	45.0	25.0	52.5	10.2	9.5	300	12.0	35	13.9	20	1.2	FDQ2QK156M104MB5
900	16	42.5	44.0	24.0	37.5	10.2	12.0	640	7.0	30	14.9	40	1.2	FDQ2QK166K324KB5
900	20	42.5	45.0	30.0	37.5	20.3	15.5	800	5.0	30	12.5	40	1.2	FDQ2QK206K424KD5
900	20	57.5	45.0	25.0	52.5	10.2	10.0	400	11.0	35	13.6	20	1.2	FDQ2QK206M104MB5
900	22	57.5	45.0	25.0	52.5	10.2	10.5	440	10.0	35	13.6	20	1.2	FDQ2QK226M104MB5
900	25	57.5	45.0	30.0	52.5	20.3	11.5	500	9.0	35	12.6	20	1.2	FDQ2QK256M164MD5
900	30	57.5	45.0	30.0	52.5	20.3	13.0	600	7.0	35	12.7	20	1.2	FDQ2QK306M164MD5
900	35	57.5	50.0	35.0	52.5	20.3	15.5	700	6.0	35	10.4	20	1.2	FDQ2QK356M204MD5
900	40	57.5	50.0	35.0	52.5	20.3	17.0	800	5.0	35	10.4	20	1.2	FDQ2QK406M204MD5
900	45	57.5	45.0	45.0	52.5	20.3	16.5	900	5.0	35	11.0	20	1.2	FDQ2QK456M314MD5
900	50	57.5	45.0	45.0	52.5	20.3	18.5	1000	4.0	35	11.0	20	1.2	FDQ2QK506M314MD5
900	100	57.5	65.0	70.0	52.5	20.3	26.5	2000	3.3	35	6.5	20	1.2	FDQ2QK107M436MD5
900	200	57.5	65.0	130.0	52.5	20.3	48.5	4000	1.6	35	4.0	20	1.2	FDQ2QK207M54EMD5
1100	1.0	32.0	20.0	11.0	27.5	\	3.0	95	45.5	25	36.6	95	0.8	FDQ3MK105G182GL5
1100	2.0	32.0	24.5	15.0	27.5	\	4.5	190	23.0	25	32.2	95	0.8	FDQ3MK205G272GL5
1100	3.0	32.0	28.0	18.0	27.5	\	6.0	285	15.5	25	26.9	95	0.8	FDQ3MK305G332GL5
1100	4.0	32.0	31.0	21.0	27.5	\	8.0	380	11.5	25	20.4	95	0.8	FDQ3MK405G372GL5
1100	5.0	32.0	35.0	20.0	27.5	\	9.0	475	9.5	25	19.5	95	0.8	FDQ3MK505G572GL5
1100	5.0	42.5	36.0	19.0	37.5	10.2	7.0	225	16.0	30	19.1	45	1.2	FDQ3MK505K224KB5
1100	6.0	42.5	36.0	19.0	37.5	10.2	7.5	270	13.5	30	19.8	45	1.2	FDQ3MK605K224KB5
1100	7.0	42.5	38.0	20.0	37.5	10.2	8.5	315	11.5	30	18.1	45	1.2	FDQ3MK705K234KB5
1100	8.0	42.5	38.0	20.0	37.5	10.2	9.5	360	10.0	30	16.6	45	1.2	FDQ3MK805K234KB5
1100	9.0	42.5	44.0	24.0	37.5	10.2	10.5	405	9.0	30	15.1	45	1.2	FDQ3MK905K324KB5
1100	10	42.5	44.0	24.0	37.5	10.2	11.0	450	8.0	30	15.5	45	1.2	FDQ3MK106K324KB5
1100	10	57.5	45.0	25.0	52.5	10.2	8.5	230	16.0	35	13.0	23	1.2	FDQ3MK106M104MB5
1100	12	42.5	45.0	30.0	37.5	20.3	13.5	540	6.5	30	12.7	45	1.2	FDQ3MK126K424KD5
1100	12	57.5	45.0	25.0	52.5	10.2	9.0	276	13.0	35	14.2	23	1.2	FDQ3MK126M104MB5
1100	15	57.5	45.0	25.0	52.5	10.2	10.5	345	10.5	35	13.0	23	1.2	FDQ3MK156M104MB5
1100	20	57.5	45.0	30.0	52.5	20.3	12.5	460	8.0	35	12.0	23	1.2	FDQ3MK206M164MD5
1100	22	57.5	50.0	35.0	52.5	20.3	14.5	506	7.0	35	10.2	23	1.2	FDQ3MK226M204MD5
1100	25	57.5	50.0	35.0	52.5	20.3	15.0	575	6.5	35	10.3	23	1.2	FDQ3MK256M204MD5
1100	30	57.5	45.0	45.0	52.5	20.3	16.5	690	5.0	35	11.0	23	1.2	FDQ3MK306M314MD5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor

## FDQ series

### ■ Technical data

Vdc	Cap Value μF	Dimensions					I <sub>rms</sub> 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
1100	60	57.5	65.0	70.0	52.5	20.3	40.0	1380	2.5	35	3.8	23	1.2	FDQ3MK606M436MD5
1100	70	57.5	65.0	70.0	52.5	20.3	34.5	1610	2.0	35	6.3	23	1.2	FDQ3MK706M436MD5
1100	120	57.5	65.0	130.0	52.5	20.3	39.5	2760	2.4	35	4.0	23	1.2	FDQ3MK127M54EMD5
1100	140	57.5	65.0	130.0	52.5	20.3	43.5	3220	2.0	35	4.0	23	1.2	FDQ3MK147M54EMD5
1200	1.0	32.0	20.0	11.0	27.5	\	3.0	100	43.0	25	38.8	100	0.8	FDQ3BK105G182GL5
1200	2.0	32.0	24.5	15.0	27.5	\	5.0	200	21.5	25	27.9	100	0.8	FDQ3BK205G272GL5
1200	3.0	32.0	28.0	18.0	27.5	\	6.5	300	14.5	25	24.5	100	0.8	FDQ3BK305G332GL5
1200	4.0	32.0	31.0	21.0	27.5	\	8.0	400	11.0	25	21.3	100	0.8	FDQ3BK405G372GL5
1200	5.0	42.5	36.0	19.0	37.5	10.2	7.0	240	15.0	30	20.4	48	1.2	FDQ3BK505K224KB5
1200	6.0	42.5	36.0	19.0	37.5	10.2	8.0	288	12.5	30	18.8	48	1.2	FDQ3BK605K224KB5
1200	7.0	42.5	38.0	20.0	37.5	10.2	9.0	336	11.0	30	16.8	48	1.2	FDQ3BK705K234KB5
1200	8.0	42.5	38.0	20.0	37.5	10.2	9.5	384	9.5	30	17.5	48	1.2	FDQ3BK805K234KB5
1200	9.0	42.5	44.0	24.0	37.5	10.2	11.0	432	8.5	30	14.6	48	1.2	FDQ3BK905K324KB5
1200	10	42.5	44.0	24.0	37.5	10.2	11.5	480	7.5	30	15.1	48	1.2	FDQ3BK106K324KB5
1200	10	57.5	45.0	25.0	52.5	10.2	8.5	240	15.0	35	13.8	24	1.2	FDQ3BK106M104MB5
1200	12	42.5	45.0	30.0	37.5	20.3	13.5	576	6.5	30	12.7	48	1.2	FDQ3BK126K424KD5
1200	12	57.5	45.0	25.0	52.5	10.2	9.5	288	12.5	35	13.3	24	1.2	FDQ3BK126M104MB5
1200	15	57.5	45.0	25.0	52.5	10.2	10.5	360	10.0	35	13.6	24	1.2	FDQ3BK156M104MB5
1200	20	57.5	50.0	35.0	52.5	20.3	14.0	480	7.5	35	10.2	24	1.2	FDQ3BK206M204MD5
1200	22	57.5	50.0	35.0	52.5	20.3	14.5	528	7.0	35	10.2	24	1.2	FDQ3BK226M204MD5
1200	25	57.5	50.0	35.0	52.5	20.3	15.5	600	6.0	35	10.4	24	1.2	FDQ3BK256M204MD5
1200	30	57.5	45.0	45.0	52.5	20.3	16.5	720	5.0	35	11.0	24	1.2	FDQ3BK306M314MD5
1200	60	57.5	65.0	70.0	52.5	20.3	23.0	1440	4.5	35	6.3	24	1.2	FDQ3BK606M436MD5
1200	120	57.5	65.0	130.0	52.5	20.3	40.5	2880	2.3	35	4.0	24	1.2	FDQ3BK127M54EMD5

\* Customized products are available by request, contact us for more details.

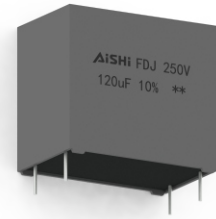
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# Metallized Polyester Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor (125°C)

## FDJ series

### Overview

The FDJ series is constructed of metallized polyester film with rectangular plastic box filled with resin and 2 or 4 tinned copper wires. These FDJ series qualified in accordance to AEC-Q200 requirement.



### Applications

- Automotive
- DC Filtering
- Low voltage DC Link circuits

### Features

- Automotive Grade (AEC-Q200)
- High temperature capabilities up to 125°C
- Capacitance up to 560uF

### Specifications

Items	Characteristics
Reference Standard	IEC 60384-2, AEC-Q200D
Climatic Category	40/105/56 IEC60068-1
Operating Temperature Range	-40°C to +125°C
Rated Voltage	63Vdc ~ 1000Vdc
Capacitance Range	0.0047μF ~ 560μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.010 (1.0%) at 1kHz C ≤ 1.0μF at +25°C
	≤ 0.015 (1.5%) at 1kHz 1.0 μF < C ≤ 10.0 μF at +25°C
	≤ 0.030 (3.0%) at 1kHz 10.0 μF < C ≤ 100.0 μF at +25°C
	≤ 0.007 (0.7%) at 100Hz C > 100.0 μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	2.0KVac 50 Hz for 10 sec at +25°C
Insulation Resistance	>30,000 MΩ (C≤0.33μF & V <sub>R</sub> > 100Vdc) at 100VDC 1 minute at +25°C
	>10,000 MΩx μF (C>0.33μF & V <sub>R</sub> > 100Vdc) at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0
	Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires or Copper-clad Steel Wire
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package
	Temperature and relative humidity should be -10°C ~ +40°C and not more than 75% RH.
	RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C±2°C      Relative humidity (RH) :93% ±2%
	Test duration: 56 days
	Capacitance change: ≤5%      DF change (Δtgδ): ≤10 X 10 <sup>-3</sup> at 1KHz
Endurance Test	Insulation resistance: ≥50% of initial limit
	Test conditions & performance:
	Temperature: +105°C±2°C      Voltage applied: 1.3 X V <sub>R</sub> (d.c.)
	Test duration: 1000 hours
	Capacitance change: ≤5%      DF change (Δtgδ): ≤10 X 10 <sup>-3</sup> at 1KHz
Insulation resistance: ≥50% of initial limit	

# Metallized Polyester Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor (125°C)

## FDJ series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions					Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm	P1 mm				
63	50	1.5	13.0	11.0	5.0	10.0	\	18.0	12	0.6	FDJ1JK155C132CL5
63	50	2.2	13.0	12.0	6.0	10.0	\	26.4	12	0.6	FDJ1JK225C162CL5
63	50	3.3	13.0	16.0	9.0	10.0	\	39.6	12	0.6	FDJ1JK335C302CL5
63	50	3.3	18.0	13.0	7.0	15.0	\	26.4	8	0.8	FDJ1JK335E212EL5
63	50	4.7	13.0	16.0	9.0	10.0	\	56.4	12	0.6	FDJ1JK475C302CL5
63	50	4.7	18.0	13.5	7.5	15.0	\	37.6	8	0.8	FDJ1JK475E292EL5
63	50	6.8	18.0	14.5	8.5	15.0	\	54.4	8	0.8	FDJ1JK685E342EL5
63	50	10.0	18.0	18.0	9.0	15.0	\	80.0	8	0.8	FDJ1JK106E392EL5
63	50	15	26.0	17.0	8.5	22.5	\	75.0	5	0.8	FDJ1JK156F202FL5
63	50	22	26.0	19.0	10.0	22.5	\	110.0	5	0.8	FDJ1JK226F242FL5
63	50	18	32.0	18.0	9.0	27.5	\	54.0	3	0.8	FDJ1JK186G152GL5
63	50	22	32.0	20.0	11.0	27.5	\	66.0	3	0.8	FDJ1JK226G182GL5
63	50	27	32.0	20.0	11.0	27.5	\	81.0	3	0.8	FDJ1JK276G182GL5
63	50	33	32.0	22.0	13.0	27.5	\	99.0	3	0.8	FDJ1JK336G212GL5
63	50	39	32.0	22.0	13.0	27.5	\	117.0	3	0.8	FDJ1JK396G212GL5
63	50	47	32.0	24.5	15.0	27.5	\	141.0	3	0.8	FDJ1JK476G272GL5
63	50	56	32.0	28.0	18.0	27.5	\	168.0	3	0.8	FDJ1JK566G332GL5
63	50	68	32.0	28.0	18.0	27.5	\	204.0	3	0.8	FDJ1JK686G332GL5
63	50	82	32.0	31.0	21.0	27.5	\	246.0	3	0.8	FDJ1JK826G372GL5
63	50	100	32.0	31.0	21.0	27.5	\	300.0	3	0.8	FDJ1JK107G372GL5
63	50	100	42.5	36.0	19.0	37.5	10.2	80.0	1	1.2	FDJ1JK107K224KB5
63	50	120	42.5	36.0	19.0	37.5	10.2	96.0	1	1.2	FDJ1JK127K224KB5
63	50	150	42.5	36.0	19.0	37.5	10.2	120.0	1	1.2	FDJ1JK157K224KB5
63	50	180	42.5	40.0	20.0	37.5	10.2	144.0	1	1.2	FDJ1JK187K244KB5
63	50	220	42.5	44.0	24.0	37.5	10.2	176.0	1	1.2	FDJ1JK227K324KB5
63	50	270	42.5	45.0	30.0	37.5	20.3	216.0	1	1.2	FDJ1JK277K424KD5
63	50	330	42.5	45.0	30.0	37.5	20.3	264.0	1	1.2	FDJ1JK337K424KD5
63	50	220	57.5	45.0	25.0	52.5	10.2	44.0	0	1.2	FDJ1JK227M104MB5
63	50	270	57.5	45.0	25.0	52.5	10.2	54.0	0	1.2	FDJ1JK277M104MB5
63	50	330	57.5	45.0	25.0	52.5	10.2	66.0	0	1.2	FDJ1JK337M104MB5
63	50	390	57.5	45.0	30.0	52.5	20.3	78.0	0	1.2	FDJ1JK397M164MD5
63	50	470	57.5	50.0	35.0	52.5	20.3	94.0	0	1.2	FDJ1JK477M204MD5
63	50	560	57.5	50.0	35.0	52.5	20.3	112.0	0	1.2	FDJ1JK567M204MD5
100	50	1.0	18.0	11.0	5.0	10.0	\	10.0	10	0.6	FDJ1KK105E142EL5
100	50	1.5	18.0	13.0	7.0	10.0	\	15.0	10	0.8	FDJ1KK155E212EL5
100	50	2.2	18.0	13.0	7.0	10.0	\	22.0	10	0.8	FDJ1KK225E212EL5
100	50	3.3	18.0	14.5	8.5	15.0	\	33.0	10	0.8	FDJ1KK335E342EL5
100	50	4.7	18.0	14.5	8.5	15.0	\	47.0	10	0.8	FDJ1KK475E342EL5
100	50	4.7	26.0	17.0	8.5	22.5	\	28.2	6	0.8	FDJ1KK475F202FL5
100	50	6.8	26.0	17.0	8.5	22.5	\	40.8	6	0.8	FDJ1KK685F202FL5
100	50	10	26.0	19.0	10.0	22.5	\	60.0	6	0.8	FDJ1KK106F242FL5
100	50	15	26.0	19.0	10.0	22.5	\	90.0	6	0.8	FDJ1KK156F242FL5
100	50	15	32.0	20.0	11.0	27.5	\	75.0	5	0.8	FDJ1KK156G182GL5
100	50	18	32.0	22.0	13.0	27.5	\	90.0	5	0.8	FDJ1KK186G212GL5
100	50	22	32.0	22.0	13.0	27.5	\	110.0	5	0.8	FDJ1KK226G212GL5

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# Metallized Polyester Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor (125°C)

## FDJ series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions					Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm	P1 mm				
100	50	27	32.0	24.5	15.0	27.5	\	135.0	5	0.8	FDJ1KK276G272GL5
100	50	33	32.0	28.0	18.0	27.5	\	165.0	5	0.8	FDJ1KK336G332GL5
100	50	39	32.0	28.0	18.0	27.5	\	195.0	5	0.8	FDJ1KK396G332GL5
100	50	47	32.0	31.0	21.0	27.5	\	235.0	5	0.8	FDJ1KK476G372GL5
100	50	56	32.0	31.0	21.0	27.5	\	280.0	5	0.8	FDJ1KK566G372GL5
100	50	56	42.5	36.0	19.0	37.5	10.2	56.0	1	1.2	FDJ1KK566K224KB5
100	50	68	42.5	36.0	19.0	37.5	10.2	68.0	1	1.2	FDJ1KK686K224KB5
100	50	82	42.5	36.0	19.0	37.5	10.2	82.0	1	1.2	FDJ1KK826K224KB5
100	50	100	42.5	40.0	20.0	37.5	10.2	100.0	1	1.2	FDJ1KK107K244KB5
100	50	120	42.5	44.0	24.0	37.5	10.2	120.0	1	1.2	FDJ1KK127K324KB5
100	50	150	42.5	45.0	30.0	37.5	20.3	150.0	1	1.2	FDJ1KK157K424KD5
100	50	180	42.5	45.0	30.0	37.5	20.3	180.0	1	1.2	FDJ1KK187K424KD5
100	50	120	57.5	45.0	25.0	52.5	10.2	36.0	0	1.2	FDJ1KK127M104MB5
100	50	150	57.5	45.0	25.0	52.5	10.2	45.0	0	1.2	FDJ1KK157M104MB5
100	50	180	57.5	45.0	25.0	52.5	10.2	54.0	0	1.2	FDJ1KK187M104MB5
100	50	220	57.5	45.0	30.0	52.5	20.3	66.0	0	1.2	FDJ1KK227M164MD5
100	50	270	57.5	50.0	35.0	52.5	20.3	81.0	0	1.2	FDJ1KK277M204MD5
100	50	330	57.5	50.0	35.0	52.5	20.3	99.0	0	1.2	FDJ1KK337M204MD5
160	80	4.7	32.0	18.0	9.0	27.5	\	28.2	6	0.8	FDJ2CK475G152GL5
160	80	6.8	32.0	20.0	11.0	27.5	\	40.8	6	0.8	FDJ2CK685G182GL5
160	80	10	32.0	20.0	11.0	27.5	\	60.0	6	0.8	FDJ2CK106G182GL5
160	80	15	32.0	22.0	13.0	27.5	\	90.0	6	0.8	FDJ2CK156G212GL5
160	80	18	32.0	24.5	15.0	27.5	\	108.0	6	0.8	FDJ2CK186G272GL5
160	80	22	32.0	28.0	18.0	27.5	\	132.0	6	0.8	FDJ2CK226G332GL5
160	80	27	32.0	28.0	18.0	27.5	\	162.0	6	0.8	FDJ2CK276G332GL5
160	80	33	32.0	31.0	31.0	27.5	\	198.0	6	0.8	FDJ2CK336G562GL5
160	80	33	42.5	36.0	19.0	37.5	10.2	66.0	2	1.2	FDJ2CK336K224KB5
160	80	39	42.5	36.0	19.0	37.5	10.2	78.0	2	1.2	FDJ2CK396K224KB5
160	80	47	42.5	36.0	19.0	37.5	10.2	94.0	2	1.2	FDJ2CK476K224KB5
160	80	56	42.5	40.0	20.0	37.5	10.2	112.0	2	1.2	FDJ2CK566K244KB5
160	80	68	42.5	40.0	20.0	37.5	10.2	136.0	2	1.2	FDJ2CK686K244KB5
160	80	82	42.5	44.0	24.0	37.5	10.2	164.0	2	1.2	FDJ2CK826K324KB5
160	80	100	42.5	45.0	30.0	37.5	20.3	200.0	2	1.2	FDJ2CK107K424KD5
160	80	120	42.5	45.0	30.0	37.5	20.3	240.0	2	1.2	FDJ2CK127K424KD5
160	80	82	57.5	45.0	25.0	52.5	10.2	32.8	0	1.2	FDJ2CK826M104MB5
160	80	100	57.5	45.0	25.0	52.5	10.2	40.0	0	1.2	FDJ2CK107M104MB5
160	80	120	57.5	45.0	25.0	52.5	10.2	48.0	0	1.2	FDJ2CK127M104MB5
160	80	150	57.5	45.0	30.0	52.5	20.3	60.0	0	1.2	FDJ2CK157M164MD5
160	80	180	57.5	50.0	35.0	52.5	20.3	72.0	0	1.2	FDJ2CK187M204MD5
160	80	220	57.5	50.0	35.0	52.5	20.3	88.0	0	1.2	FDJ2CK227M204MD5
250	160	0.15	13.0	11.0	5.0	10.0	\	5.4	36	0.6	FDJ2EK154C132CL5
250	160	0.22	13.0	12.0	6.0	10.0	\	7.9	36	0.6	FDJ2EK224C162CL5
250	160	0.33	13.0	12.0	6.0	10.0	\	11.9	36	0.6	FDJ2EK334C162CL5
250	160	0.33	18.0	11.0	5.0	15.0	\	6.6	20	0.6	FDJ2EK334E142EL5
250	160	0.47	13.0	16.0	9.0	10.0	\	16.9	36	0.6	FDJ2EK474C302CL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polyester Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor (125°C)

## FDJ series

### Technical data

Vdc	Vac	Cap Value μF	Dimensions					Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm	P1 mm				
250	160	0.47	18.0	13.0	7.0	15.0	\	9.4	20	0.6	FDJ2EK474E212EL5
250	160	0.68	18.0	13.5	7.5	15.0	\	13.6	20	0.8	FDJ2EK684E292EL5
250	160	1.0	18.0	14.5	8.5	15.0	\	20.0	20	0.8	FDJ2EK105E342EL5
250	160	1.5	18.0	18.0	10.0	15.0	\	30.0	20	0.8	FDJ2EK155E452EL5
250	160	1.5	26.0	17.0	8.5	22.5	\	18.0	12	0.8	FDJ2EK155F202FL5
250	160	2.2	26.0	19.0	10.0	22.5	\	26.4	12	0.8	FDJ2EK225F242FL5
250	160	3.3	26.0	22.0	12.0	22.5	\	39.6	12	0.8	FDJ2EK335F272FL5
250	160	4.7	32.0	20.0	11.0	27.5	\	37.6	8	0.8	FDJ2EK475G182GL5
250	160	6.8	32.0	22.0	13.0	27.5	\	54.4	8	0.8	FDJ2EK685G212GL5
250	160	10	32.0	24.5	15.0	27.5	\	80.0	8	0.8	FDJ2EK106G272GL5
250	160	15	32.0	28.0	18.0	27.5	\	120.0	8	0.8	FDJ2EK156G332GL5
250	160	18	32.0	31.0	21.0	27.5	\	144.0	8	0.8	FDJ2EK186G372GL5
250	160	18	42.5	36.0	19.0	37.5	10.2	54.0	3	1.2	FDJ2EK186K224KB5
250	160	22	42.5	36.0	19.0	37.5	10.2	66.0	3	1.2	FDJ2EK226K224KB5
250	160	27	42.5	36.0	19.0	37.5	10.2	81.0	3	1.2	FDJ2EK276K224KB5
250	160	33	42.5	40.0	20.0	37.5	10.2	99.0	3	1.2	FDJ2EK336K244KB5
250	160	39	42.5	40.0	20.0	37.5	10.2	117.0	3	1.2	FDJ2EK396K244KB5
250	160	47	42.5	44.0	24.0	37.5	10.2	141.0	3	1.2	FDJ2EK476K324KB5
250	160	56	42.5	45.0	30.0	37.5	20.3	168.0	3	1.2	FDJ2EK566K424KD5
250	160	68	42.5	45.0	30.0	37.5	20.3	204.0	3	1.2	FDJ2EK686K424KD5
250	160	56	57.5	45.0	25.0	52.5	10.2	56.0	1	1.2	FDJ2EK566M104MB5
250	160	68	57.5	45.0	25.0	52.5	10.2	68.0	1	1.2	FDJ2EK686M104MB5
250	160	82	57.5	45.0	25.0	52.5	10.2	82.0	1	1.2	FDJ2EK826M104MB5
250	160	100	57.5	45.0	30.0	52.5	20.3	100.0	1	1.2	FDJ2EK107M164MD5
250	160	120	57.5	50.0	35.0	52.5	20.3	120.0	1	1.2	FDJ2EK127M204MD5
400	220	0.068	13.0	11.0	5.0	10.0	\	3.5	52	0.6	FDJ2GK683C132CL5
400	220	0.10	13.0	12.0	6.0	10.0	\	5.2	52	0.6	FDJ2GK104C162CL5
400	220	0.15	13.0	16.0	9.0	10.0	\	7.8	52	0.6	FDJ2GK154C302CL5
400	220	0.15	18.0	13.0	7.0	15.0	\	4.8	32	0.6	FDJ2GK154E212EL5
400	220	0.22	13.0	16.0	9.0	10.0	\	11.4	52	0.6	FDJ2GK224C302CL5
400	220	0.22	18.0	13.0	7.0	15.0	\	7.0	32	0.6	FDJ2GK224E212EL5
400	220	0.33	18.0	13.5	7.5	15.0	\	10.6	32	0.8	FDJ2GK334E292EL5
400	220	0.47	18.0	18.0	9.0	15.0	\	15.0	32	0.8	FDJ2GK474E392EL5
400	220	0.68	26.0	17.0	8.5	22.5	\	12.2	18	0.8	FDJ2GK684F202FL5
400	220	1.0	26.0	19.0	10.0	22.5	\	18.0	18	0.8	FDJ2GK105F242FL5
400	220	1.5	26.0	20.0	11.0	22.5	\	27.0	18	0.8	FDJ2GK155F262FL5
400	220	1.5	32.0	20.0	11.0	27.5	\	21.0	14	0.8	FDJ2GK155G182GL5
400	220	2.2	32.0	24.5	13.0	27.5	\	30.8	14	0.8	FDJ2GK225G222GL5
400	220	3.3	32.0	24.5	15.0	27.5	\	46.2	14	0.8	FDJ2GK335G272GL5
400	220	4.7	32.0	28.0	18.0	27.5	\	65.8	14	0.8	FDJ2GK475G332GL5
630	250	0.022	13.0	11.0	5.0	10.0	\	1.5	70	0.6	FDJ2LK223C132CL5
630	250	0.033	13.0	12.0	6.0	10.0	\	2.3	70	0.6	FDJ2LK333C162CL5
630	250	0.033	18.0	11.0	5.0	15.0	\	2.2	66	0.6	FDJ2LK333E142EL5
630	250	0.047	13.0	12.0	6.0	10.0	\	3.3	70	0.6	FDJ2LK473C162CL5
630	250	0.047	18.0	13.0	7.0	15.0	\	3.1	66	0.6	FDJ2LK473E212EL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.



## Metallized Polyester Film Capacitor (Radial Lead) Automotive Grade DC-Link Capacitor (125°C)

### FDJ series

#### ■ Technical data

Vdc	Vac	Cap Value μF	Dimensions					Peak Current A	dv/dt V/us	Lead Wire mm	Part Number
			W mm	H mm	T mm	P mm	P1 mm				
630	250	0.068	18.0	13.5	7.5	15.0	\	4.5	66	0.8	FDJ2LK683E292EL5
630	250	0.10	18.0	13.5	7.5	15.0	\	6.6	66	0.8	FDJ2LK104E292EL5
630	250	0.10	26.0	14.0	7.0	22.5	\	3.8	38	0.8	FDJ2LK104F152FL5
630	250	0.15	26.0	17.0	8.5	22.5	\	5.7	38	0.8	FDJ2LK154F202FL5
630	250	0.22	26.0	17.0	8.5	22.5	\	8.4	38	0.8	FDJ2LK224F202FL5
630	250	0.33	32.0	20.0	11.0	27.5	\	9.2	28	0.8	FDJ2LK334G182GL5
630	250	0.47	32.0	20.0	11.0	27.5	\	13.2	28	0.8	FDJ2LK474G182GL5
630	250	0.68	32.0	24.5	13.0	27.5	\	19.0	28	0.8	FDJ2LK684G222GL5
630	250	1.0	32.0	24.5	15.0	27.5	\	28.0	28	0.8	FDJ2LK105G272GL5
630	250	1.5	32.0	28.0	18.0	27.5	\	42.0	28	0.8	FDJ2LK155G332GL5
1000	350	0.0047	13.0	11.0	5.0	10.0	\	1.2	260	0.6	FDJ3KK472C132CL5
1000	350	0.0068	13.0	12.0	6.0	10.0	\	1.8	260	0.6	FDJ3KK682C162CL5
1000	350	0.010	18.0	11.0	5.0	15.0	\	1.3	130	0.6	FDJ3KK103E142EL5
1000	350	0.015	18.0	13.0	7.0	15.0	\	2.0	130	0.6	FDJ3KK153E212EL5
1000	350	0.022	18.0	13.5	7.5	15.0	\	2.9	130	0.8	FDJ3KK223E292EL5
1000	350	0.033	18.0	14.5	8.5	15.0	\	4.3	130	0.8	FDJ3KK333E342EL5
1000	350	0.033	26.0	14.0	7.0	22.5	\	2.2	68	0.8	FDJ3KK333F152FL5
1000	350	0.047	26.0	17.0	8.5	22.5	\	3.2	68	0.8	FDJ3KK473F202FL5
1000	350	0.068	26.0	17.0	8.5	22.5	\	4.6	68	0.8	FDJ3KK683F202FL5
1000	350	0.10	26.0	19.0	10.0	22.5	\	6.8	68	0.8	FDJ3KK104F242FL5
1000	350	0.15	32.0	20.0	11.0	27.5	\	7.5	50	0.8	FDJ3KK154G182GL5
1000	350	0.22	32.0	24.5	13.0	27.5	\	11.0	50	0.8	FDJ3KK224G222GL5
1000	350	0.47	32.0	35.0	20.0	27.5	\	23.5	50	0.8	FDJ3KK474G572GL5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Top Terminal) DC-Link Applications

## FDB series

### Overview

The FDB series is constructed of metallized polypropylene film with cylindrical plastic can type filled with resin, screw terminals and plastic deck.



### Applications

- Transportation: EV or HEV
- Welders, Elevators
- Motor drive systems

### Features

- Long lifetime
- Self-healing property
- Low inductance
- Low ESR, high ripple current handling capabilities
- Used in DC-Link circuits, can replace electrolytic capacitor

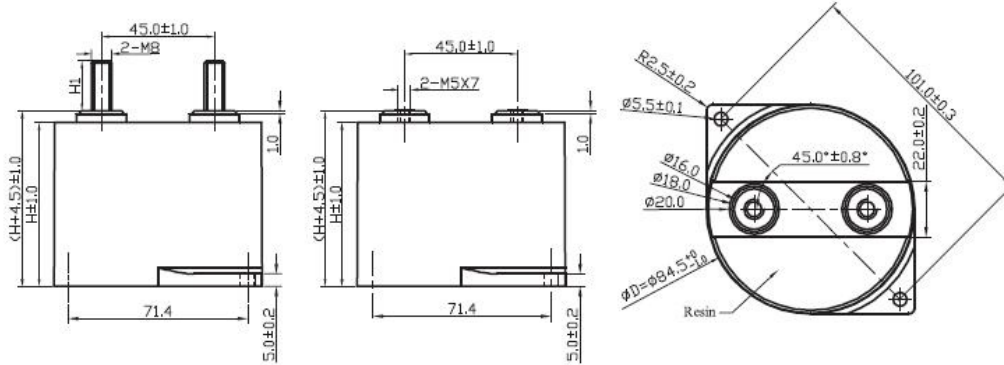
### Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40°C ~ 105°C (above 85°C, voltage will be derated by 1.35%/°C)
Upper Temperature Tmax	+85°C
Lower Temperature Tmin	-40°C
Rated Voltage	500Vdc ~ 1100Vdc
Capacitance Range	50µF ~ 280µF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 100Hz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Case	Self extinguishing plastic case UL94 V-0
Terminals	M5, M6 or M8 threaded bolt; also available with threaded female connections
Construction	Dry construction, filled by solid resin
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C ±2°C Relative humidity (RH) :85% ±2%
	Loading Voltage: Rated voltage (DC)
	Test duration : 1000 hours Capacitance change: ≤±5%

# Metallized Polypropylene Film Capacitor (Top Terminal) DC-Link Applications

## FDB series

### Outline Drawing



### Technical data (Male terminals)

Vdc	Cap Value μF	Dimensions			Irms 10KHz 50 °C A	Peak Current A	ESR 1KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Pkg Qty pcs	Part Number
		D mm	H mm	P mm								
500	150	85.0	40.0	45.0	65	5250	1.8	25	4.3	35	8	FDB2HK157440MQ8A
500	220	85.0	51.0	45.0	65	5500	1.8	40	4.8	25	8	FDB2HK227451MQ8A
500	280	85.0	64.0	45.0	70	5600	1.6	40	5.4	20	8	FDB2HK287464MQ8A
600	100	85.0	40.0	45.0	70	3500	1.5	25	5.0	35	8	FDB2KK107440MQ8A
600	150	85.0	51.0	45.0	80	3750	1.4	30	6.5	25	8	FDB2KK157451MQ8A
600	220	85.0	64.0	45.0	90	4400	1.5	40	4.5	20	8	FDB2KK227464MQ8A
800	66	85.0	40.0	45.0	70	2310	2.0	25	5.0	35	8	FDB2NK666440MQ8A
800	100	85.0	51.0	45.0	75	2500	1.8	30	5.0	25	8	FDB2NK107451MQ8A
800	140	85.0	64.0	45.0	80	2800	1.6	40	8.4	20	8	FDB2NK147464MQ8A
800	220	85.0	64.0	45.0	100	4400	1.4	40	4.8	20	8	FDB2NK227464MQ8A
1000	66	85.0	40.0	45.0	70	2310	1.0	25	4.2	35	8	FDB3KK666440MQ8A
1000	120	85.0	51.0	45.0	85	3000	2.2	30	5.2	25	8	FDB3KK127451MQ8A
1000	140	85.0	64.0	45.0	100	2800	1.5	40	3.1	20	8	FDB3KK147464MQ8A
1100	50	85.0	40.0	45.0	55	1750	2.4	30	4.5	35	8	FDB3MK506440MQ8A
1100	100	85.0	51.0	45.0	55	2500	2.0	30	4.5	25	8	FDB3MK107451MQ8A

### Technical data (Female terminals)

Vdc	Cap Value μF	Dimensions			Irms 10KHz 50 °C A	Peak Current A	ESR 1KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Pkg Qty pcs	Part Number
		D mm	H mm	P mm								
500	150	85.0	40.0	45.0	65.0	5250	1.8	25	4.3	35	8	FDB2HK157440FQ55
500	220	85.0	51.0	45.0	65.0	5500	1.8	40	4.8	25	8	FDB2HK227451FQ55
500	280	85.0	64.0	45.0	70.0	5600	1.6	40	5.4	20	8	FDB2HK287464FQ55
600	100	85.0	40.0	45.0	70.0	3500	1.5	25	5.0	35	8	FDB2KK107440FQ55
600	150	85.0	51.0	45.0	80.0	3750	1.4	30	6.5	25	8	FDB2KK157451FQ55
600	220	85.0	64.0	45.0	90.0	4400	1.5	40	4.5	20	8	FDB2KK227464FQ55
800	66	85.0	40.0	45.0	70.0	2310	2.0	25	5.0	35	8	FDB2NK666440FQ55
800	100	85.0	51.0	45.0	75.0	2500	1.8	30	5.0	25	8	FDB2NK107451FQ55
800	140	85.0	64.0	45.0	80.0	2800	1.6	40	8.4	20	8	FDB2NK147464FQ55
800	220	85.0	64.0	45.0	100.0	4400	1.4	40	4.8	20	8	FDB2NK227464FQ55
1000	66	85.0	40.0	45.0	70.0	2310	1.0	25	4.2	35	8	FDB3KK666440FQ55
1000	120	85.0	51.0	45.0	85.0	3000	2.2	30	5.2	25	8	FDB3KK127451FQ55
1000	140	85.0	64.0	45.0	100.0	2800	1.5	40	3.1	20	8	FDB3KK147464FQ55
1100	50	85.0	40.0	45.0	55.0	1750	2.4	30	4.5	35	8	FDB3MK506440FQ55
1100	100	85.0	51.0	45.0	55.0	2500	2.0	30	4.5	25	8	FDB3MK107451FQ55

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\* Specification are subject to change, please refer to approved data sheets.

## FDB series

### Performance Notes

Rs: Equivalent series resistance - Ohmic resistances (Ohm)

Dielectric Dissipation Factor:  $\tan\delta_0$  ( Polypropylene: 0.0002)

Ta: Ambient temperature

Rth: Thermal resistance °C/ W, indicates hot spot temperature rise due to power dissipation losses

Pj: Joule losses  $P_j = R_s \cdot I_{rms}^2$

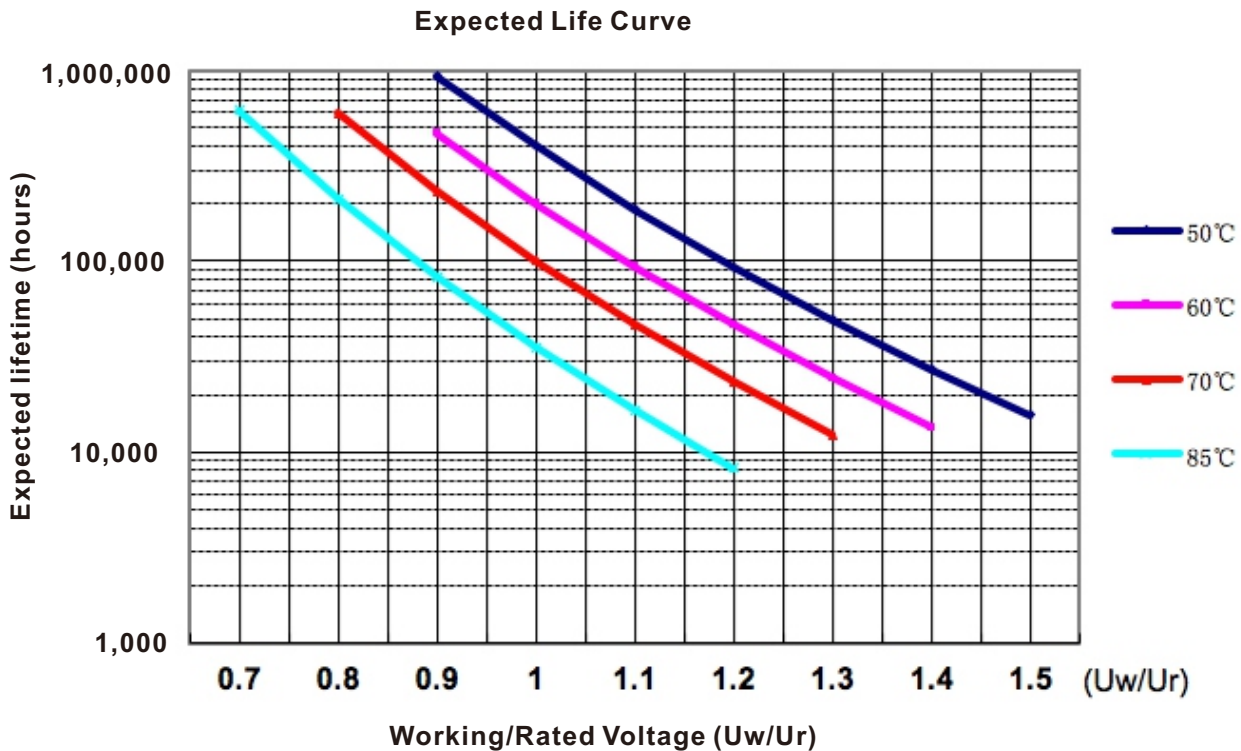
Pd: Dielectric losses

$$P_d = X_c \cdot I_{rms}^2 \cdot \tan\delta = I_{rms}^2 / (2 \cdot \pi \cdot f \cdot C) \cdot \tan\delta$$

T<sub>hs</sub>: Hot spot temperature within the capacitor

$$T_{hs} = T_a + (P_j + P_d) \cdot R_{th}$$

Design life: 100,000 hours at Un @ Hot-Spot temperature ≤ +70°C



### Cautions and warnings

- In case of dents of more than 1mm depth or any other mechanical damage, capacitors must not be used at all.
- Lateral brackets for fixing are standard for all types.
- Check tightness of the connection / terminals periodically.
- Do not handle the capacitor before it is discharged.
- It is necessary to verify that maximum hot-spot temperature is not exceeded at extreme condition.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments. Regular maintenance and cleaning especially of the terminals is required to avoid conductive path between terminal / or terminal and ground.

# Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Applications

## FDC series

### Overview

The FDC series is constructed of metallized polypropylene film with cylindrical aluminium can filled with resin, screw terminals and plastic deck.



### Applications

- DC filtering
- Energy storage
- Solar inverter and wind power

### Features

- Long lifetime
- Self-healing property
- High capacitance density
- Low ESR, high ripple current
- Used in DC-Link circuits, can replace electrolytic capacitor

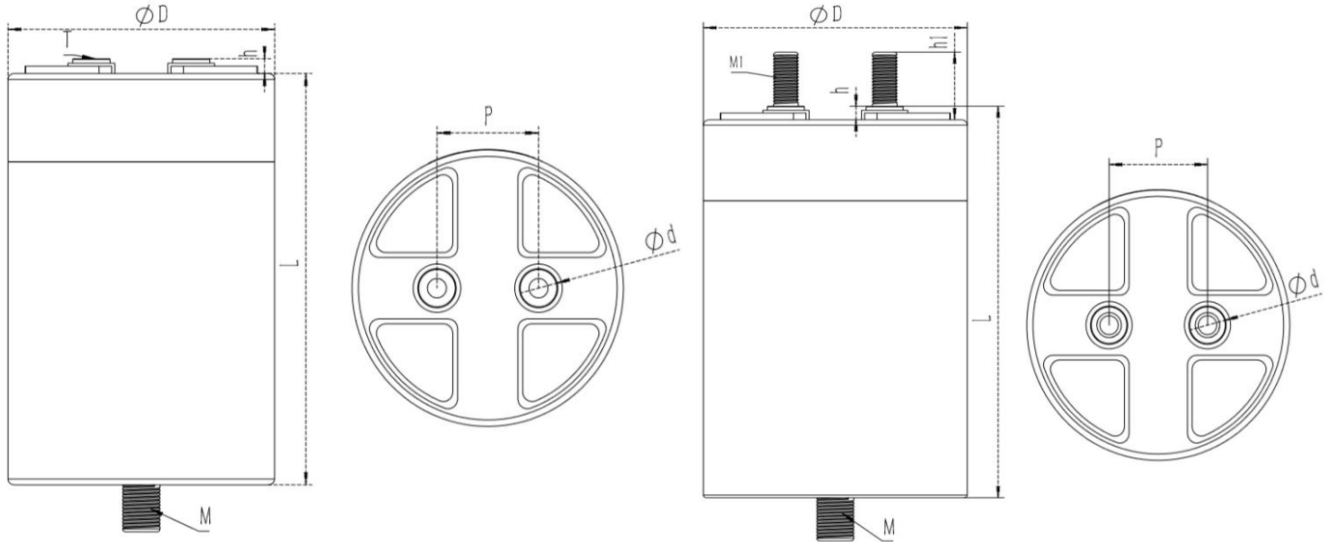
### Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40°C ~ +85°C
Upper Temperature Tmax	+85°C
Lower Temperature Tmin	-40°C
Rated Voltage	600Vdc ~ 1300Vdc
Capacitance Range	170µF ~ 2200µF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 100Hz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Terminals	High current M6 or M8 terminals
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
Construction	Aluminium case with or without threaded bolt M12
	Plastic deck flame retardant execution UL94 V-0
	Thermosetting resin sealing UL94 V-0 compliant
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change :≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Applications

## FDC series

### ■ Outline Drawing



D	L	h	P	T	M1	M
±2.0	±2.0	±1.0	±1.0	Female Terminal	Male Terminal	Mounting Stud
mm	mm	mm	mm			
76.0	80.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
76.0	105.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	80.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	105.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	126.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	142.5	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	151.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	161.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	178.5	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	180.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	205.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
86.0	225.0	5.0	32.0	M6 x 10	M8 x 20	M12 x 16
116.0	105.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	155.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	161.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	170.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	180.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	185.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	205.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	230.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	235.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	265.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	330.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
116.0	340.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
136.0	235.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
136.0	265.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16
136.0	340.0	5.0	50.0	M6 x 10	M8 x 20	M12 x 16

\* Customized products are available by request, contact us for more details.

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# Metallized Polypropylene Film Capacitor (Aluminium Can)

## DC-Link Applications

### FDC series

#### Technical data (Female terminals)

Vdc	Cap Value μF	Dimensions			Irms 10KHz 50°C A	Peak Current A	ESR 1KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Pkg Qty pcs	Part Number
		D mm	L mm	P mm								
600	650	86.0	105.0	32.0	70.0	3900	1.2	60	5.0	6.0	8	FDC2KK657510MP8D
600	800	86.0	142.5	32.0	75.0	6400	1.5	60	3.6	8.0	8	FDC2KK807514MP8D
600	1000	86.0	161.0	32.0	60.0	7500	1.0	65	3.7	7.5	8	FDC2KK108516MP8D
700	220	76.0	80.0	32.0	50.0	3080	2.6	40	7.2	14.0	12	FDC2MK227380MP8D
700	300	86.0	80.0	32.0	55.0	4200	2.4	40	6.5	14.0	8	FDC2MK307580MP8D
700	420	86.0	105.0	32.0	58.0	2940	2.5	50	4.2	7.0	8	FDC2MK427510MP8D
700	450	86.0	126.0	32.0	65.0	3150	2.3	50	4.6	7.0	8	FDC2MK457512MP8D
700	550	86.0	142.5	32.0	65.0	3300	2.5	60	4.1	6.0	8	FDC2MK557514MP8D
800	290	76.0	105.0	32.0	50.0	3045	4.0	60	4.0	10.5	12	FDC2NK297310MP8D
800	300	86.0	105.0	32.0	60.0	2550	2.5	60	3.8	8.5	8	FDC2NK307510MP8D
800	390	86.0	105.0	32.0	62.0	3315	2.9	60	3.6	8.5	8	FDC2NK397510MP8D
800	450	86.0	142.5	32.0	65.0	3600	2.4	60	3.2	8.0	8	FDC2NK457514MP8D
800	460	86.0	151.0	32.0	70.0	3680	2.3	50	3.4	8.0	8	FDC2NK467515MP8D
800	850	86.0	205.0	32.0	60.0	4250	1.8	50	3.6	5.0	8	FDC2NK857520MP8D
800	1000	116.0	155.0	50.0	65.0	7000	1.8	60	2.6	7.0	5	FDC2NK108915MR8D
800	1600	116.0	180.0	50.0	75.0	9600	3.0	65	3.4	6.0	5	FDC2NK168918MR8D
900	480	86.0	142.5	32.0	65.0	4080	2.0	50	4.2	8.5	8	FDC2QK487514MP8D
900	1000	116.0	155.0	50.0	68.0	7000	1.6	80	3.0	7.0	5	FDC2QK108915MR8D
900	1500	116.0	185.0	50.0	60.0	12000	2.0	65	4.8	8.0	5	FDC2QK158918MR8D
900	1800	116.0	235.0	50.0	100.0	14400	0.8	60	2.4	8.0	5	FDC2QK188923MR8D
1000	900	116.0	155.0	50.0	72.0	10800	2.9	85	2.6	12.0	5	FDC3KK907915MR8D
1000	1300	116.0	230.0	50.0	100.0	9750	1.5	100	2.4	7.5	5	FDC3KK138923MR8D
1000	1600	116.0	230.0	50.0	100.0	8000	1.5	75	2.1	5.0	5	FDC3KK168923MR8D
1100	170	76.0	105.0	32.0	50.0	1700	3.2	60	3.8	10.0	12	FDC3MK177310MP8D
1100	240	86.0	105.0	32.0	55.0	3000	1.7	50	3.8	12.5	8	FDC3MK247510MP8D
1100	300	86.0	142.5	32.0	58.0	2550	2.0	60	2.7	8.5	8	FDC3MK307514MP8D
1100	330	86.0	142.5	32.0	60.0	2805	3.0	60	3.3	8.5	8	FDC3MK337514MP8D
1100	400	86.0	142.5	32.0	60.0	3400	2.8	60	3.3	8.5	8	FDC3MK407514MP8D
1100	420	86.0	142.5	32.0	58.0	3570	2.3	85	3.0	8.5	8	FDC3MK427514MP8D
1100	500	86.0	180.0	32.0	72.0	6000	1.5	80	3.0	12.0	8	FDC3MK507518MP8D
1100	600	86.0	225.0	32.0	65.0	6300	2.5	60	2.0	10.5	8	FDC3MK607522MP8D
1100	720	116.0	155.0	50.0	69.0	9360	3.2	85	2.6	13.0	5	FDC3MK727915MR8D
1100	800	116.0	170.0	50.0	80.0	8800	1.5	55	2.4	11.0	5	FDC3MK807917MR8D
1100	1000	116.0	205.0	50.0	85.0	10000	2.2	50	2.5	10.0	5	FDC3MK108920MR8D
1100	1100	116.0	235.0	50.0	90.0	9900	1.3	60	2.1	9.0	5	FDC3MK118923MR8D
1100	1600	116.0	340.0	50.0	100.0	12000	2.3	100	2.4	7.5	5	FDC3MK168934MR8D
1100	1700	136.0	235.0	50.0	110.0	10200	1.5	60	1.7	6.0	2	FDC3MK178023MR8D
1100	2000	136.0	265.0	50.0	120.0	12000	1.2	60	1.3	6.0	2	FDC3MK208026MR8D
1100	2200	136.0	340.0	50.0	120.0	13200	1.2	60	1.0	6.0	2	FDC3MK228034MR8D
1200	420	86.0	178.5	32.0	60.0	4200	3.0	70	3.2	10.0	8	FDC3BK427517MP8D
1200	540	86.0	225.0	32.0	60.0	5400	2.5	85	3.3	10.0	8	FDC3BK547522MP8D
1200	950	116.0	235.0	50.0	90.0	9500	1.5	75	2.1	10.0	5	FDC3BK957923MR8D
1200	1000	116.0	235.0	50.0	90.0	10000	1.5	75	2.1	10.0	5	FDC3BK108923MR8D
1200	1200	116.0	265.0	50.0	70.0	12000	0.8	50	1.5	10.0	5	FDC3BK128926MR8D
1300	250	86.0	142.5	32.0	40.0	2000	4.0	85	5.4	8.0	8	FDC3SK257514MP8D
1300	330	86.0	180.0	32.0	55.0	4950	2.6	80	3.4	15.0	8	FDC3SK337518MP8D
1300	420	116.0	105.0	50.0	50.0	6300	2.3	40	2.1	15.0	5	FDC3SK427910MR8D
1300	470	116.0	161.0	50.0	65.0	5640	1.5	80	7.1	12.0	5	FDC3SK477916MR8D
1300	1100	116.0	330.0	50.0	85.0	9900	2.7	200	2.1	9.0	5	FDC3SK118933MR8D

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# Metallized Polypropylene Film Capacitor (Aluminium Can)

## DC-Link Applications

### FDC series

#### Technical data (Female terminals)

Vdc	Cap Value μF	Dimensions			Irms 10KHz 50°C A	Peak Current A	ESR 1KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Pkg Qty pcs	Part Number
		D mm	L mm	P mm								
600	650	86.0	105.0	32.0	70.0	3900	1.2	60	5.0	6.0	8	FDC2KK657510FP6D
600	800	86.0	142.5	32.0	75.0	6400	1.5	60	3.6	8.0	8	FDC2KK807514FP6D
600	1000	86.0	161.0	32.0	60.0	7500	1.0	65	3.7	7.5	8	FDC2KK108516FP6D
700	220	76.0	80.0	50.0	50.0	3080	2.6	40	7.2	14.0	12	FDC2MK227380FP6D
700	300	86.0	80.0	32.0	55.0	4200	2.4	40	6.5	14.0	8	FDC2MK307580FP6D
700	420	86.0	105.0	32.0	58.0	2940	2.5	50	4.2	7.0	8	FDC2MK427510FP6D
700	450	86.0	126.0	32.0	65.0	3150	2.3	50	4.6	7.0	8	FDC2MK457512FP6D
700	550	86.0	142.5	32.0	65.0	3300	2.5	60	4.1	6.0	8	FDC2MK557514FP6D
800	290	76.0	105.0	50.0	50.0	3045	4.0	60	4.0	10.5	12	FDC2NK297310FP6D
800	300	86.0	105.0	32.0	60.0	2550	2.5	60	3.8	8.5	8	FDC2NK307510FP6D
800	390	86.0	105.0	32.0	62.0	3315	2.9	60	3.6	8.5	8	FDC2NK397510FP6D
800	450	86.0	142.5	32.0	65.0	3600	2.4	60	3.2	8.0	8	FDC2NK457514FP6D
800	460	86.0	151.0	32.0	70.0	3680	2.3	50	3.4	8.0	8	FDC2NK467515FP6D
800	850	86.0	205.0	32.0	60.0	4250	1.8	50	3.6	5.0	8	FDC2NK857520FP6D
800	1000	116.0	155.0	50.0	65.0	7000	1.8	60	2.6	7.0	5	FDC2NK108915FR6D
800	1600	116.0	180.0	50.0	75.0	9600	3.0	65	3.4	6.0	5	FDC2NK168918FR6D
900	480	86.0	142.5	32.0	65.0	4080	2.0	50	4.2	8.5	8	FDC2QK487514FP6D
900	1000	116.0	155.0	50.0	68.0	7000	1.6	80	3.0	7.0	5	FDC2QK108915FR6D
900	1500	116.0	185.0	50.0	60.0	12000	2.0	65	4.8	8.0	5	FDC2QK158918FR6D
900	1800	116.0	235.0	50.0	100.0	14400	0.8	60	2.4	8.0	5	FDC2QK188923FR6D
1000	900	116.0	155.0	50.0	72.0	10800	2.9	85	2.6	12.0	5	FDC3KK907915FR6D
1000	1300	116.0	230.0	50.0	100.0	9750	1.5	100	2.4	7.5	5	FDC3KK138923FR6D
1000	1600	116.0	230.0	50.0	100.0	8000	1.5	75	2.1	5.0	5	FDC3KK168923FR6D
1100	170	76.0	105.0	50.0	50.0	1700	3.2	60	3.8	10.0	12	FDC3MK177310FP6D
1100	240	86.0	105.0	32.0	55.0	3000	1.7	50	3.8	12.5	8	FDC3MK247510FP6D
1100	300	86.0	142.5	32.0	58.0	2550	2.0	60	2.7	8.5	8	FDC3MK307514FP6D
1100	330	86.0	142.5	32.0	60.0	2805	3.0	60	3.3	8.5	8	FDC3MK337514FP6D
1100	400	86.0	142.5	32.0	60.0	3400	2.8	60	3.3	8.5	8	FDC3MK407514FP6D
1100	420	86.0	142.5	32.0	58.0	3570	2.3	85	3.0	8.5	8	FDC3MK427514FP6D
1100	500	86.0	180.0	32.0	72.0	6000	1.5	80	3.0	12.0	8	FDC3MK507518FP6D
1100	600	86.0	225.0	32.0	65.0	6300	2.5	60	2.0	10.5	8	FDC3MK608522FP6D
1100	720	116.0	155.0	50.0	69.0	9360	3.2	85	2.6	13.0	5	FDC3MK727915FR6D
1100	800	116.0	170.0	50.0	80.0	8800	1.5	55	2.4	11.0	5	FDC3MK807917FR6D
1100	1000	116.0	205.0	50.0	85.0	10000	2.2	50	2.5	10.0	5	FDC3MK108920FR6D
1100	1100	116.0	235.0	50.0	90.0	9900	1.3	60	2.1	9.0	5	FDC3MK118923FR6D
1100	1600	116.0	340.0	50.0	100.0	12000	2.3	100	2.4	7.5	5	FDC3MK168934FR6D
1100	1700	136.0	235.0	50.0	110.0	10200	1.5	60	1.7	6.0	2	FDC3MK178023FR6D
1100	2000	136.0	265.0	50.0	120.0	12000	1.2	60	1.3	6.0	2	FDC3MK208026FR6D
1100	2200	136.0	340.0	50.0	120.0	13200	1.2	60	1.0	6.0	2	FDC3MK228034FR6D
1200	420	86.0	178.5	32.0	60.0	4200	3.0	70	3.2	10.0	8	FDC3BK427517FP6D
1200	540	86.0	225.0	32.0	60.0	5400	2.5	85	3.3	10.0	8	FDC3BK547522FP6D
1200	950	116.0	235.0	50.0	90.0	9500	1.5	75	2.1	10.0	5	FDC3BK957923FR6D
1200	1000	116.0	235.0	50.0	90.0	10000	1.5	75	2.1	10.0	5	FDC3BK108923FR6D
1200	1200	116.0	265.0	50.0	70.0	12000	0.8	50	1.5	10.0	5	FDC3BK128926FR6D
1300	250	86.0	142.5	32.0	40.0	2000	4.0	85	5.4	8.0	8	FDC3SK257514FP6D
1300	330	86.0	180.0	32.0	55.0	4950	2.6	80	3.4	15.0	8	FDC3SK337518FP6D
1300	420	116.0	105.0	50.0	50.0	6300	2.3	40	2.1	15.0	5	FDC3SK427910FR6D
1300	470	116.0	161.0	50.0	65.0	5640	1.5	80	7.1	12.0	5	FDC3SK477916FR6D
1300	1100	116.0	330.0	50.0	85.0	9900	2.7	200	2.1	9.0	5	FDC3SK118933FR6D

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## FDC series

### Performance Notes

Rs: Equivalent series resistance - Ohmic resistances (Ohm)

Dielectric Dissipation Factor:  $\tan\delta_0$  ( Polypropylene: 0.0002)

Ta: Ambient temperature

Rth: Thermal resistance °C/ W, indicates hot spot temperature rise due to power dissipation losses

Pj: Joule losses  $P_j = R_s \cdot I_{rms}^2$

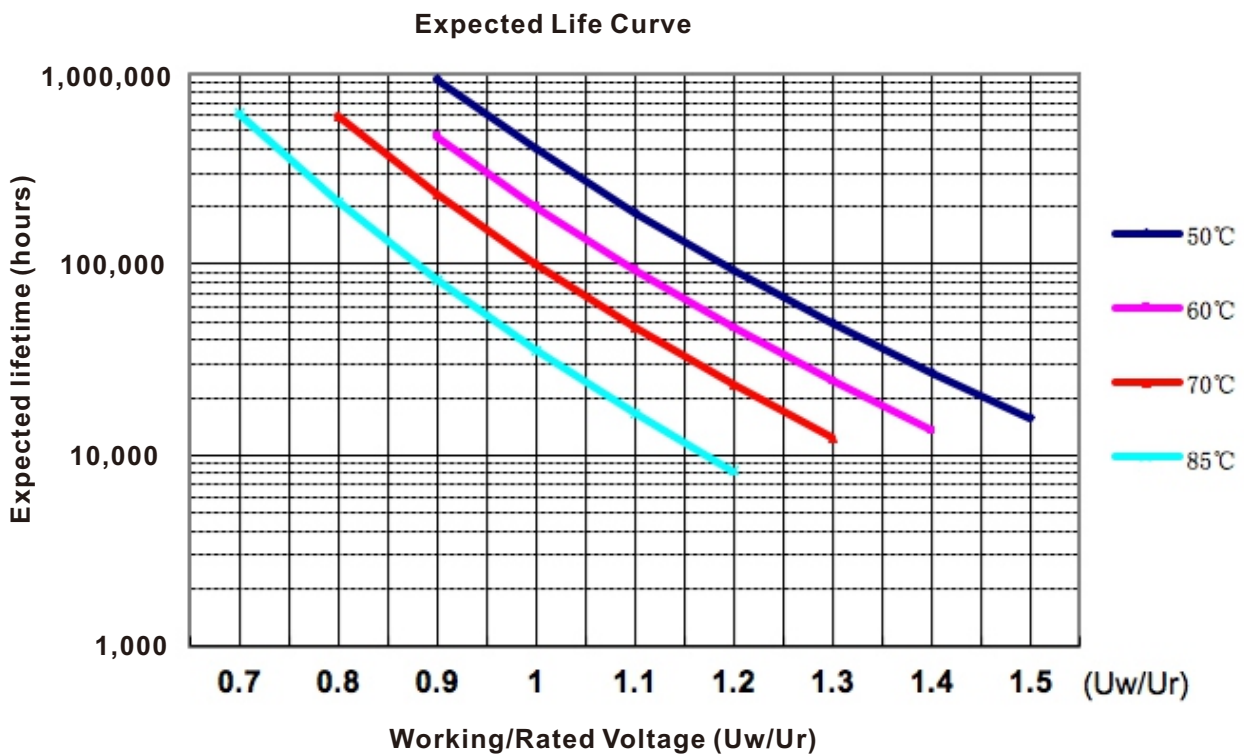
Pd: Dielectric losses

$$P_d = X_c \cdot I_{rms}^2 \cdot \tan\delta = I_{rms}^2 / (2 \cdot \pi \cdot f \cdot C) \cdot \tan\delta$$

T<sub>hs</sub>: Hot spot temperature within the capacitor

$$T_{hs} = T_a + (P_j + P_d) \cdot R_{th}$$

Design life: 100,000 hours at Un @ Hot-Spot temperature  $\leq +70^\circ\text{C}$



### Cautions and warnings

- In case of dents of more than 1 mm depth or any other mechanical damage, capacitors must not be used at all.
- To ensure full functionality of capacitor, a minimum space of 12 mm has to be kept above each capacitor.
- Do not handle the capacitor before it is discharged.
- Check tightness of the connection/ terminals periodically.
- The threaded bottom stud of the capacitor has to be used for grounding. The maximum tightening torque is 15Nm.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments. Regular maintenance and cleaning especially of the terminals is required to avoid conductive path between terminal / or terminal and ground.

# Metallized Polypropylene Film Capacitor (Snap-in) DC-Link Applications

## FDD series



### Overview

The FDD series is constructed of metallized polypropylene film with cylindrical plastic box type filled with epoxy resin and snap-in pins.

### Applications

- DC filtering
- Frequency converters
- Motor drive systems
- Welders, elevators

### Features

- High ripple current
- Self-healing property
- Low losses
- High capacitance density

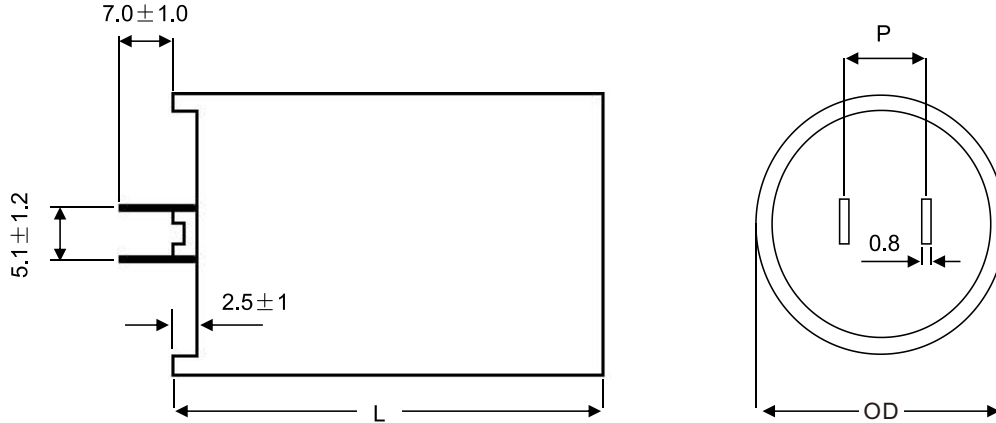
### Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40°C ~ +105°C
Rated Voltage	500Vdc ~ 1200Vdc
Capacitance Range	8μF ~ 100μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 100Hz at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0kVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C ≥ 30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T = +70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Terminals	Tinned copper pins, standard terminals length 7 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Snap-in) Temperature Humidity Bias (THB) DC-Link Applications

## FDD series

### Outline Drawing



### Dimensions - Case:

Unit: mm

Case Code	OD	L	P	P1
	$\pm 1.0$	$\pm 1.0$	$\pm 1.0$	$\pm 1.0$
A10	36.0	54.0	12.7	5.1
A20	51.0	51.0	12.7	5.1
A30	50.0	63.0	12.7	5.1
A40	56.5	63.0	12.7	5.1
A50	63.5	51.5	12.7	5.1

### Technical data

Vdc	Cap Value $\mu\text{F}$	Dimensions		P	Irms 100KHz			Peak Current A	ESR 100KHZ m $\Omega$	ESL nH	Thermal Res $^{\circ}\text{C}/\text{W}$	dv/dt V/us	Part Number
		OD mm	L mm		25 $^{\circ}\text{C}$ A	50 $^{\circ}\text{C}$ A	70 $^{\circ}\text{C}$ A						
500	35	36.0	54.0	12.7	22.0	18.5	13.0	1050	8.0	25	8.6	30	FDD2HK356YP4PDA7
500	80	50.0	63.0	12.7	30.0	25.5	13.5	2400	6.0	25	8.2	30	FDD2HK806YP4PDA7
500	100	50.0	63.0	12.7	35.0	28.0	14.5	3000	5.8	25	7.9	30	FDD2HK107YP4PDA7
600	30	36.0	54.0	12.7	22.0	18.0	12.0	900	9.0	25	9.8	30	FDD2KK306YP4PDA7
600	80	50.0	63.0	12.7	32.0	25.0	14.0	2400	6.8	25	9.5	30	FDD2KK806YP4PDA7
700	20	36.0	54.0	12.7	20.0	16.0	10.0	800	10.0	25	10.8	40	FDD2MK206YP4PDA7
700	50	50.0	63.0	12.7	30.0	24.0	12.0	2000	7.0	25	9.4	40	FDD2MK506YP4PDA7
800	15	36.0	54.0	12.7	19.0	15.0	10.0	750	10.0	25	10.5	50	FDD2NK156YP4PDA7
800	40	50.0	63.0	12.7	28.0	23.0	12.0	2000	7.5	25	9.5	50	FDD2NK406YP4PDA7
800	60	50.0	51.0	12.7	33.0	27.0	16.0	3000	4.0	25	6.5	50	FDD2NK606YP4PDA7
800	60	50.0	63.0	12.7	33.0	27.0	16.0	3000	4.0	25	6.5	50	FDD2NK606YP4PDA7
800	90	56.5	63.0	12.7	36.0	29.0	20.0	4500	3.0	25	5.0	50	FDD2NK906YP4PDA7
800	90	63.5	51.5	12.7	36.0	29.0	20.0	4500	3.0	25	5.0	50	FDD2NK906YP4PDA7
900	14	36.0	54.0	12.7	18.0	15.0	9.5	700	10.5	25	10.5	50	FDD2QK146YP4PDA7
900	35	50.0	63.0	12.7	27.0	22.0	11.5	1750	8.0	25	9.5	50	FDD2QK356YP4PDA7
1000	10	36.0	54.0	12.7	18.0	14.0	9.0	500	12.0	25	10.5	50	FDD3KK106YP4PDA7
1000	25	50.0	63.0	12.7	27.0	22.0	11.5	1250	8.5	25	9.5	50	FDD3KK256YP4PDA7
1200	8.0	36.0	54.0	12.7	16.0	12.0	8.5	400	13.5	25	10.8	50	FDD3BK805YP4PDA7
1200	20	50.0	63.0	12.7	26.0	21.0	11.0	1000	9.0	25	9.5	50	FDD3BK206YP4PDA7

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Overview

The FDE series is constructed of metallized polypropylene film with plastic casing filled with epoxy resin with terminals. The capacitors are suitable for EV/HEV circuits, can replace electrolytic capacitor completely.



### Applications

- Transportation: EV/HEV DC-Link circuits.

### Features

- Low ESR, low ESL
- Self-healing property
- Long lifetime
- High ripple current

IGBT voltage	FDE capacitor	
	Rated voltage	Maximum voltage
650 -705	450	500
750	500	550
1200	900	950

Rated voltage is the continuous operating voltage taking into account for the calculation of the expected lifetime.

Rated voltage will be depended on IGBT and battery voltage

### Specifications

Items	Characteristics
Reference Standard	IEC 61071 AEC-Q200
Climatic Category	40/105/21 - IEC 60068-1
Rated Voltage	450Vdc~900Vdc
Capacitance Range	300μF~1000μF
Capacitance Tolerance	±5%(J) ±10%(K) at 25°C
Dissipation Factor	0.0010 @100Hz
Test Voltage Between Terminals	1.5Un 10s
Test Voltage Between Terminals to Case	3000 Vac 50Hz 10s
Life Expectancy	Refer to expected lifetime curves
Max Hot-spot Temperature	≤ 105°C (above 85°C, voltage will be derated by 1.35%/°C)
Storage Temperature	-40°C ~ 105°C
Operating Temperature Range:	-40°C ~ 105°C
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 21 days
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V <sub>R</sub> (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C ±2°C Relative humidity (RH) :85% ±2%
	Loading Voltage: Rated voltage (DC)
	Test duration : 1000 hours Capacitance change : ≤±5%

# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### ■ Terminal Configuration



Fig.1a - for Infineon HybridPACK™1 IGBT



Fig.1b - for Infineon HybridPACK™1 IGBT  
With side mounting brackets

HybridPACK™1 platform 650V - FS\*\*\*R07A1\*\*

Ordering Code	Cn μF	Vndc V	I <sub>max</sub> A	L <sub>self</sub> nH	R <sub>s</sub> mΩ	I <sub>pk</sub> kA	I <sub>s</sub> kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2WK307X12RNQN	300	450	120	30	0.8	0.9	2.7	10*10 <sup>-4</sup>	140*72*50	0.8	1a
FDE2WK467X12RNQN	460	450	150	25	0.6	1.5	5.0	10*10 <sup>-4</sup>	140*72*50	0.8	1a
FDE2WK567X12RNQN	560	450	150	25	0.6	1.8	5.6	10*10 <sup>-4</sup>	140*72*50	0.8	1a
FDE2WK407X12RNQN	400	450	120	25	0.8	1.4	4.4	10*10 <sup>-4</sup>	140*72*50	0.8	1a
FDE2WK507X12RNQN	500	450	120	25	0.8	1.6	5.0	10*10 <sup>-4</sup>	140*72*50	0.8	1a
FDE2WK467X13RNQN	460	450	150	25	0.6	1.5	5.0	10*10 <sup>-4</sup>	140*72*50	0.8	1b
FDE2WK567X13RNQN	560	450	150	25	0.6	1.8	5.6	10*10 <sup>-4</sup>	140*72*50	0.8	1b
FDE2WK407X13RNQN	400	450	120	25	0.8	1.4	4.4	10*10 <sup>-4</sup>	140*72*50	0.8	1b
FDE2WK507X13RNQN	500	450	120	25	0.8	1.6	5.0	10*10 <sup>-4</sup>	140*72*50	0.8	1b

Notes:

- 1) I<sub>max</sub>: considering maximum hot spot temperature at 105 °C and cooling efficiency to be validated
- 2) Further mechanical configurations and capacitor values on request.
- 3) Dimension and drawing, please refer to datasheet.

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## FDE series

### ■ Terminal Configuration

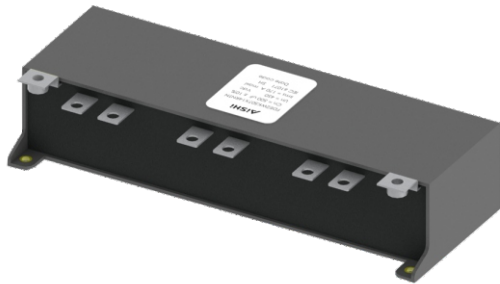


Fig.2a - for Infineon HybridPACK™2 IGBT

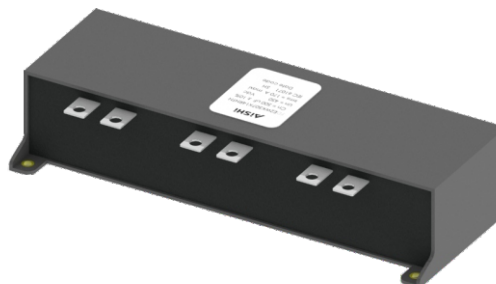


Fig.2b - for Infineon HybridPACK™2 IGBT

#### HybridPACK™2 platform 680V - FS\*\*\*R07A2\*\*

Ordering Code	Cn μF	Vndc V	I <sub>max</sub> A	L <sub>self</sub> nH	R <sub>s</sub> mΩ	I <sub>pk</sub> kA	I <sub>s</sub> kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2WK507X14RNTN	500	450	120	15	1.0	1.5	4.5	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK707X14RNTN	700	450	190	15	0.5	2.5	7.5	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK907X14RNTN	900	450	190	15	0.5	3.0	9.0	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK108X14RNTN	1000	450	190	15	0.5	3.2	10.0	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK507X14RNSN	500	450	170	15	0.7	1.8	5.5	10*10 <sup>-4</sup>	237*72*50	1.2	2b
FDE2WK707X14RNTN	700	450	170	15	0.7	2.8	8.4	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK707X14RNSN	700	450	170	15	0.7	2.8	8.4	10*10 <sup>-4</sup>	237*72*50	1.2	2b
FDE2WK857X14RNTN	850	450	170	15	0.7	3.1	9.3	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK857X14RNSN	850	450	170	15	0.7	3.1	9.3	10*10 <sup>-4</sup>	237*72*50	1.2	2b
FDE2WK907X14RNTN	900	450	170	15	0.7	3.3	9.9	10*10 <sup>-4</sup>	237*72*50	1.2	2a
FDE2WK907X14RNSN	900	450	170	15	0.7	3.3	9.9	10*10 <sup>-4</sup>	237*72*50	1.2	2b

Notes:

- 1) I<sub>max</sub>: considering maximum hot spot temperature at 105 °C and cooling efficiency to be validated
- 2) Further mechanical configurations and capacitor values on request.
- 3) Dimension and drawing, please refer to datasheet.

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# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Terminal Configuration



Fig.3a - for Infineon HybridPACK™2 IGBT with DC connectors and side mounting brackets



Fig.3b - for Infineon HybridPACK™2 IGBT with side mounting brackets

HybridPACK™2 platform 680V - FS\*\*\*R07A2\*\*

Ordering Code	Cn μF	Vndc V	I <sub>max</sub> A	L <sub>self</sub> nH	R <sub>s</sub> mΩ	I <sub>pk</sub> kA	I <sub>s</sub> kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2WK707X15RNTN	700	450	190	15	0.5	2.5	7.5	10*10 <sup>-4</sup>	237*72*50	1.2	3a
FDE2WK907X15RNTN	900	450	190	15	0.5	3.0	9.0	10*10 <sup>-4</sup>	237*72*50	1.2	3a
FDE2WK108X15RNTN	1000	450	190	15	0.5	3.2	10.0	10*10 <sup>-4</sup>	237*72*50	1.2	3a
FDE2WK507X15RNTN	500	450	170	15	0.7	1.8	5.5	10*10 <sup>-4</sup>	237*72*50	1.2	3a
FDE2WK507X15RNSN	500	450	170	15	0.7	1.8	5.5	10*10 <sup>-4</sup>	237*72*50	1.2	3b
FDE2WK707X15RNSN	700	450	170	15	0.7	2.8	8.4	10*10 <sup>-4</sup>	237*72*50	1.2	3b
FDE2WK857X15RNTN	850	450	170	15	0.7	3.1	9.3	10*10 <sup>-4</sup>	237*72*50	1.2	3a
FDE2WK857X15RNSN	850	450	170	15	0.7	3.1	9.3	10*10 <sup>-4</sup>	237*72*50	1.2	3b
FDE2WK907X15RNTN	900	450	170	15	0.7	3.3	9.9	10*10 <sup>-4</sup>	237*72*50	1.2	3a
FDE2WK907X15RNSN	900	450	170	15	0.7	3.3	9.9	10*10 <sup>-4</sup>	237*72*50	1.2	3b

Notes:

- 1) I<sub>max</sub>: considering maximum hot spot temperature at 105 °C and cooling efficiency to be validated
- 2) Further mechanical configurations and capacitor values on request.
- 3) Dimension and drawing, please refer to datasheet.

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\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Terminal Configuration

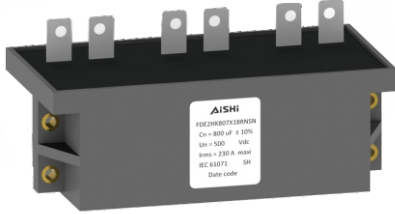


Fig.4a - for others IGBT

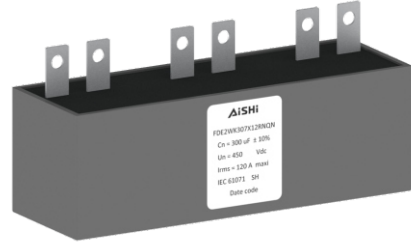


Fig.5a - for others IGBT

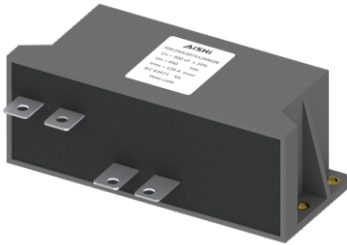


Fig.6a - for others IGBT

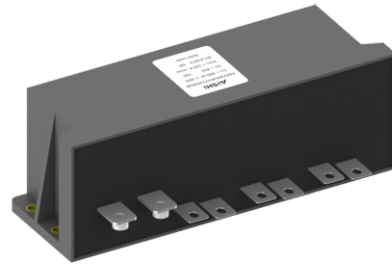


Fig.7a - for others IGBT

Ordering Code	Cn μF	Vndc V	I <sub>max</sub> A	L <sub>self</sub> nH	R <sub>s</sub> mΩ	I <sub>pk</sub> kA	I <sub>s</sub> kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2HK807X18RNSN	800	500	230	30	0.7	4	12	10*10 <sup>-4</sup>	194.5*69.5*100	1.5	Fig.4a
FDE2NK507X18RNSN	500	800	160	30	0.7	4	12	10*10 <sup>-4</sup>	194.5*69.5*100	1.5	Fig.4a
FDE2WK607X23RNSN	600	450	200	20	0.6	3	9	10*10 <sup>-4</sup>	180*60*60	1.0	Fig.5a
FDE2KK457X23RNSN	450	600	160	20	0.7	3	9	10*10 <sup>-4</sup>	180*60*60	1.0	Fig.5a
FDE2WK607X16RNRN	600	450	110	25	0.5	2	6	10*10 <sup>-4</sup>	170*72*65	1.0	Fig.6a
FDE2HK108X20RNTN	1000	500	150	30	0.4	4.5	13.5	10*10 <sup>-4</sup>	324*130*128	1.7	Fig.7a

Notes:

- 1) I<sub>max</sub>: considering maximum hot spot temperature at 105 °C and cooling efficiency to be validated
- 2) Further mechanical configurations and capacitor values on request.
- 3) Dimension and drawing, please refer to datasheet.

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 \* Specification are subject to change, please refer to approved data sheets.



# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Terminal Configuration

Fig.1a

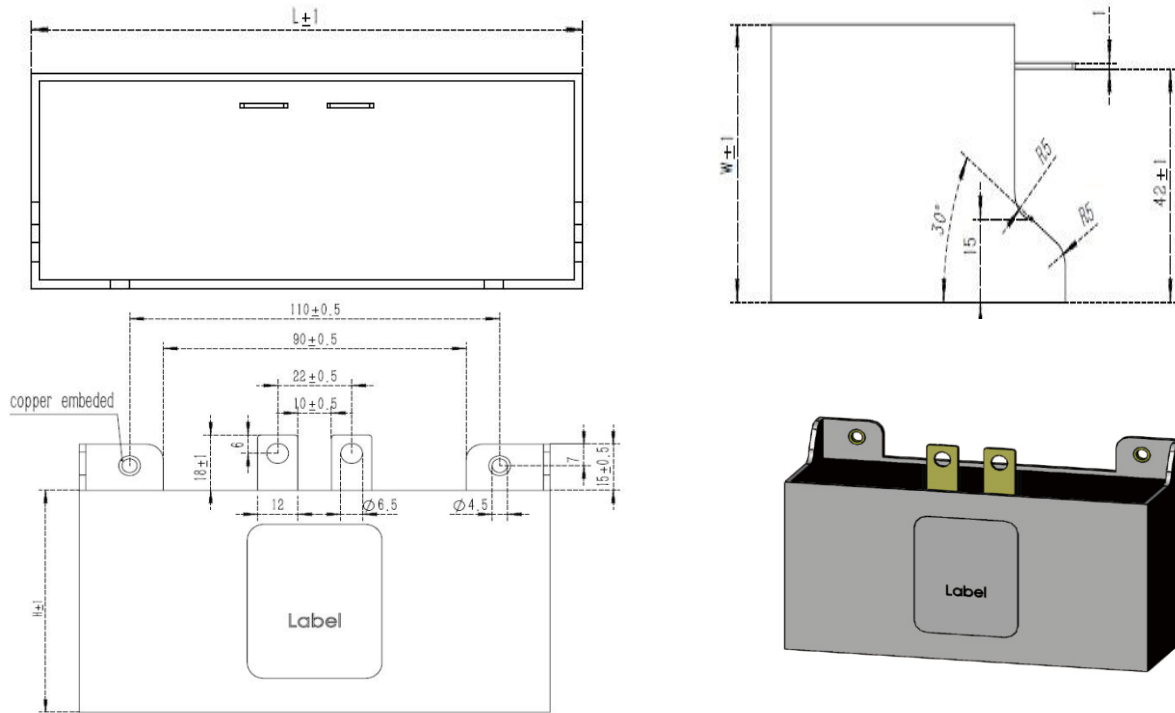
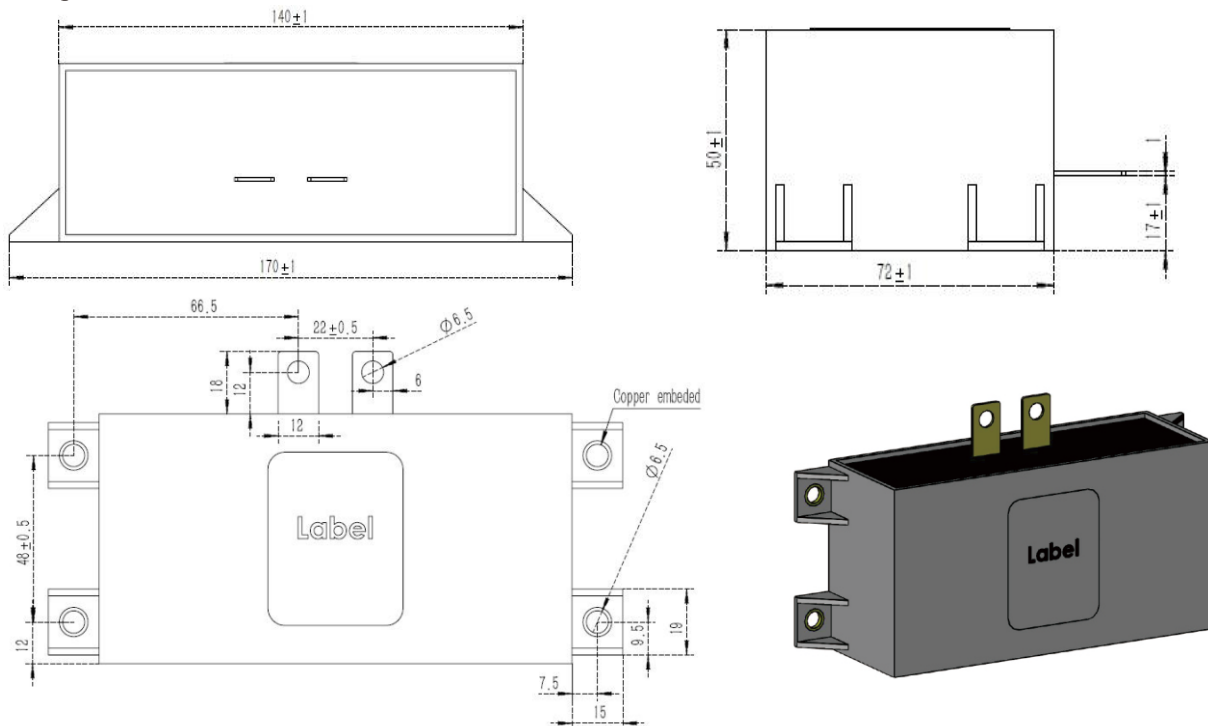


Fig.1b



# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Terminal Configuration

Fig.2a

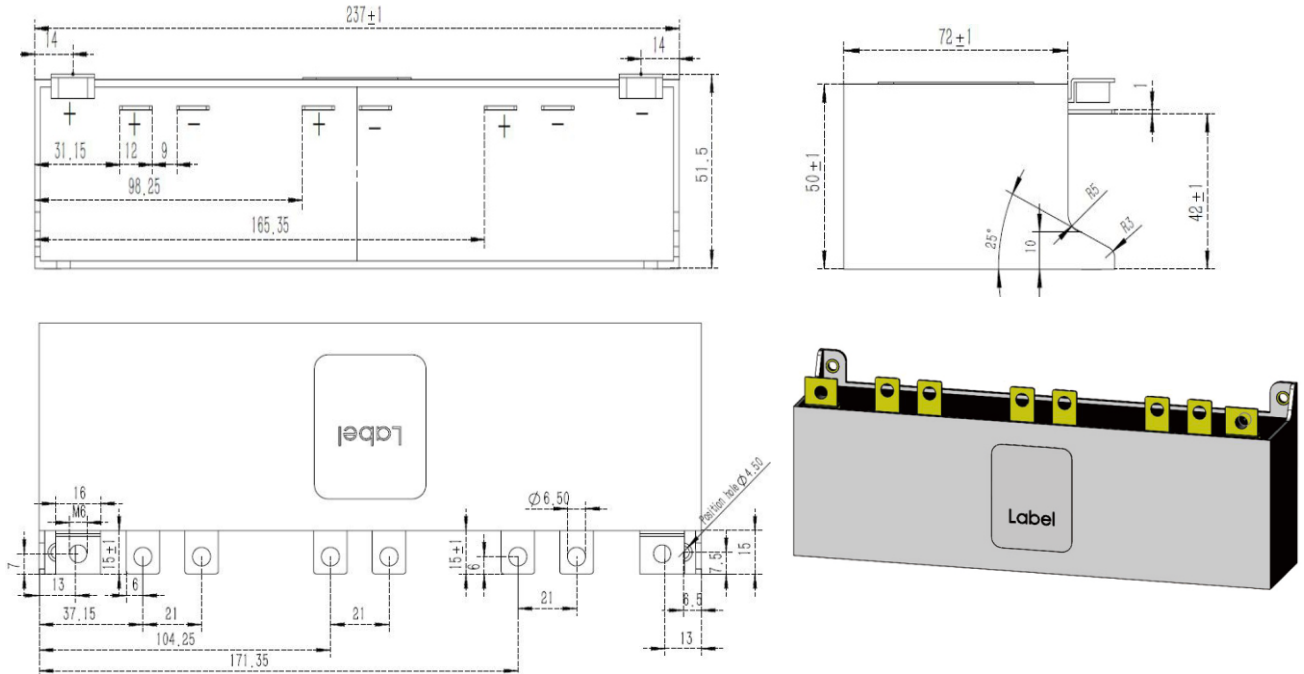
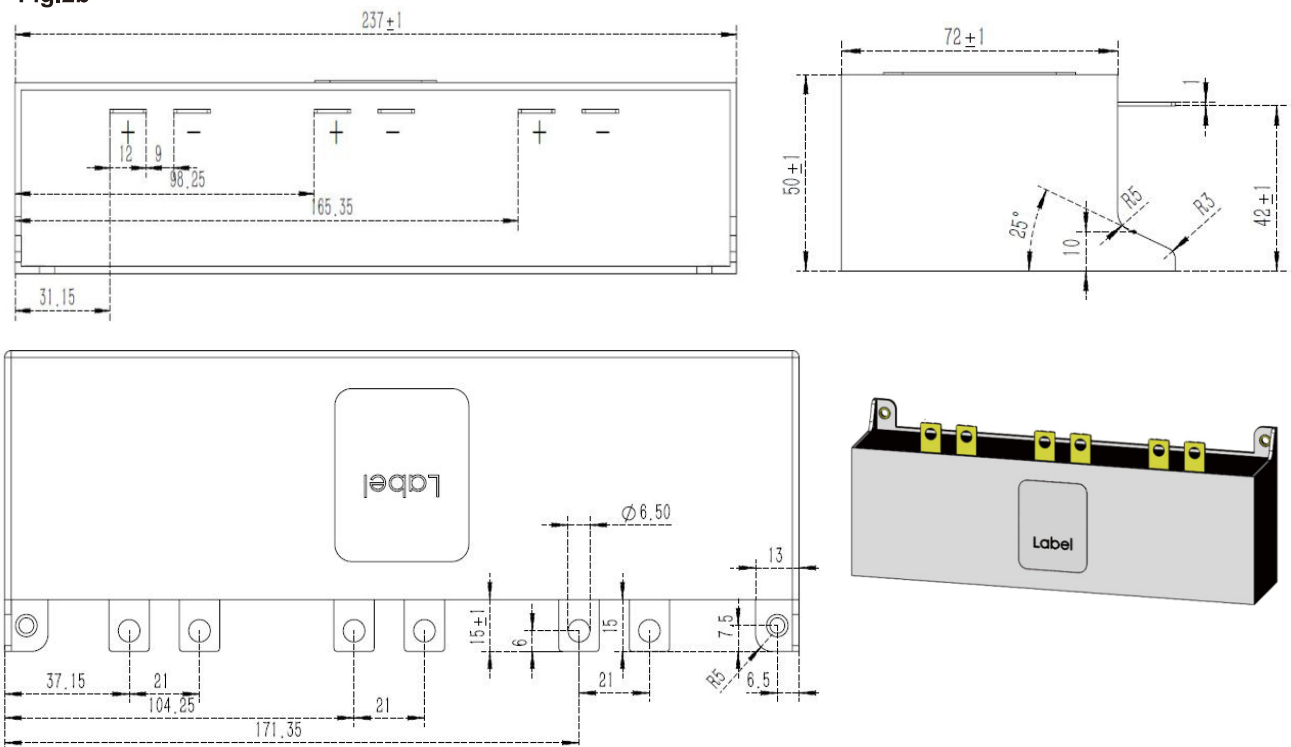


Fig.2b



DC-Link Capacitors

# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Terminal Configuration

Fig.3a

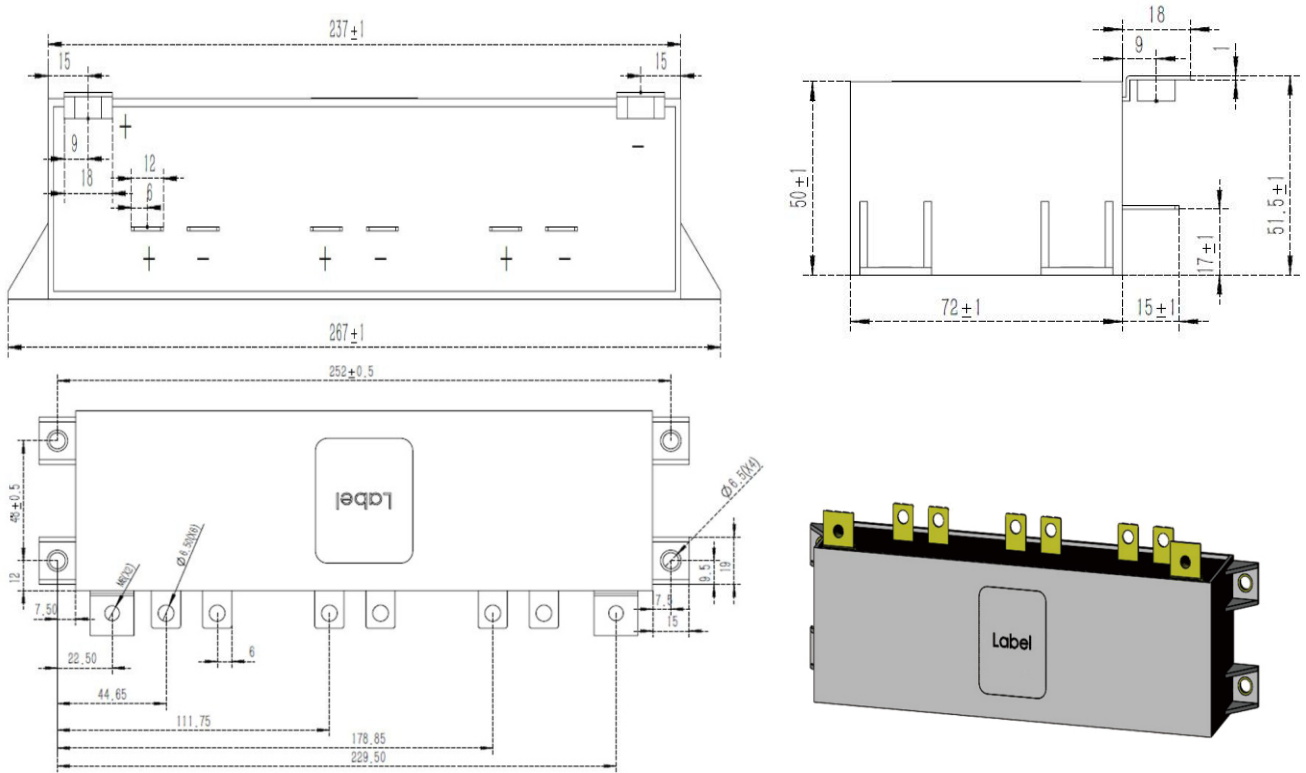
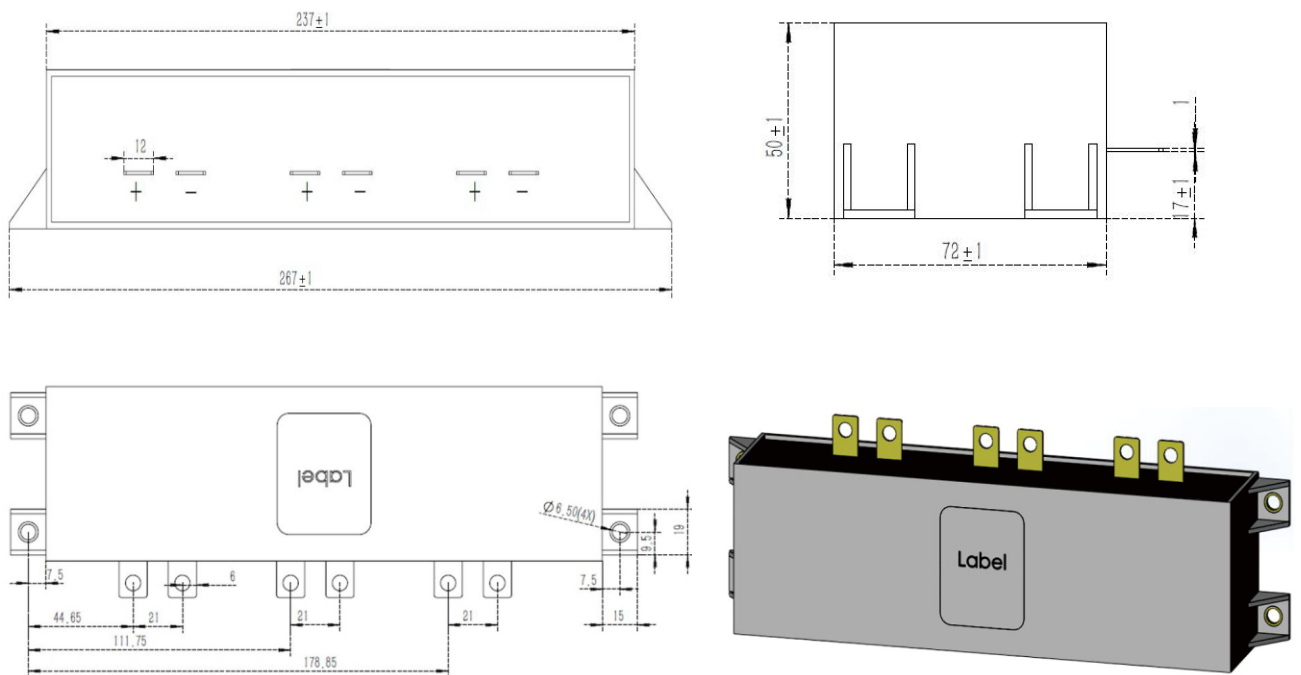


Fig.3b



## FDE series

### Terminal Configuration

Fig.4a

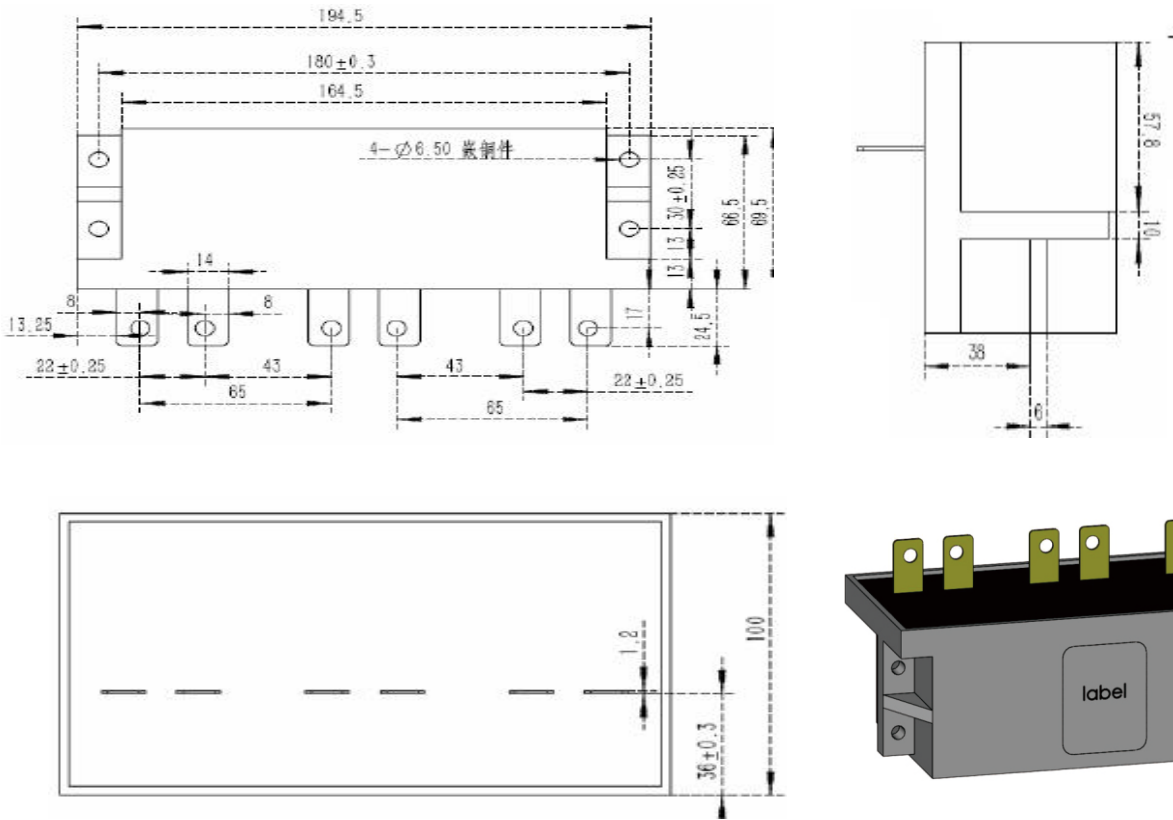
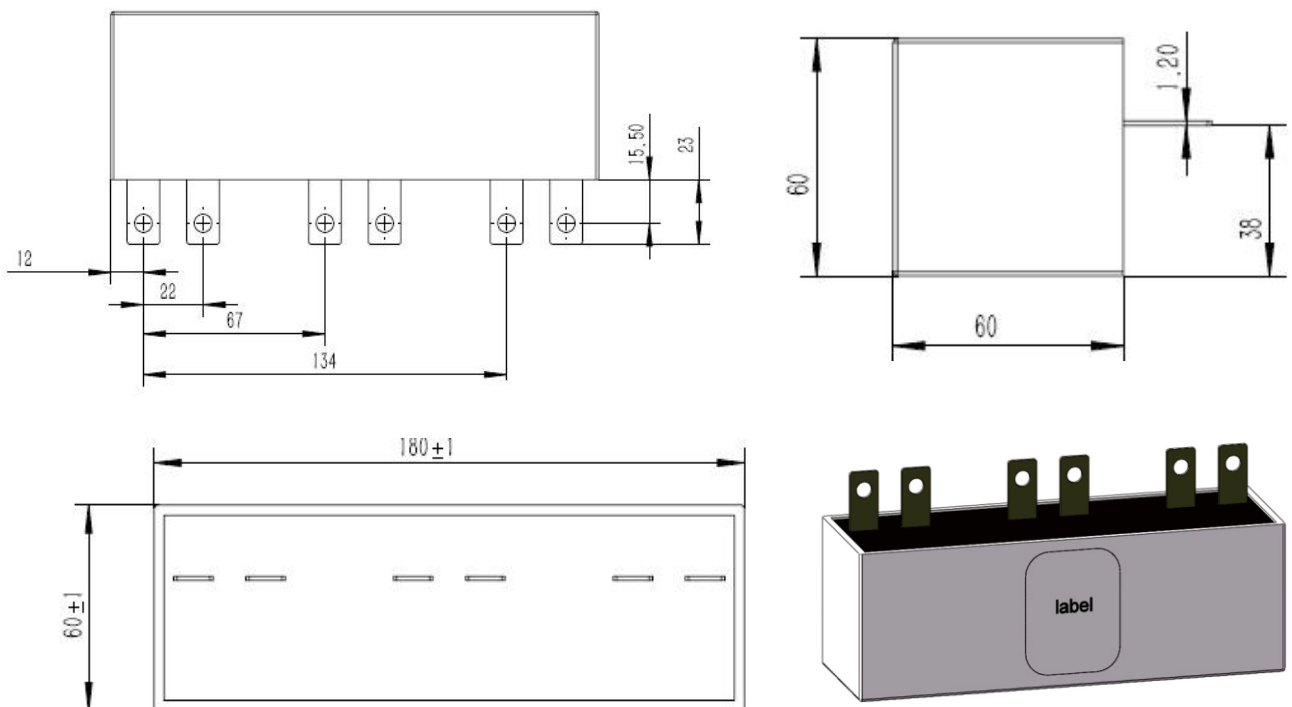


Fig.5a



# Metallized Polypropylene Film Capacitor (Plastic Case, For EV/HEV)

## FDE series

### Terminal Configuration

Fig.6a

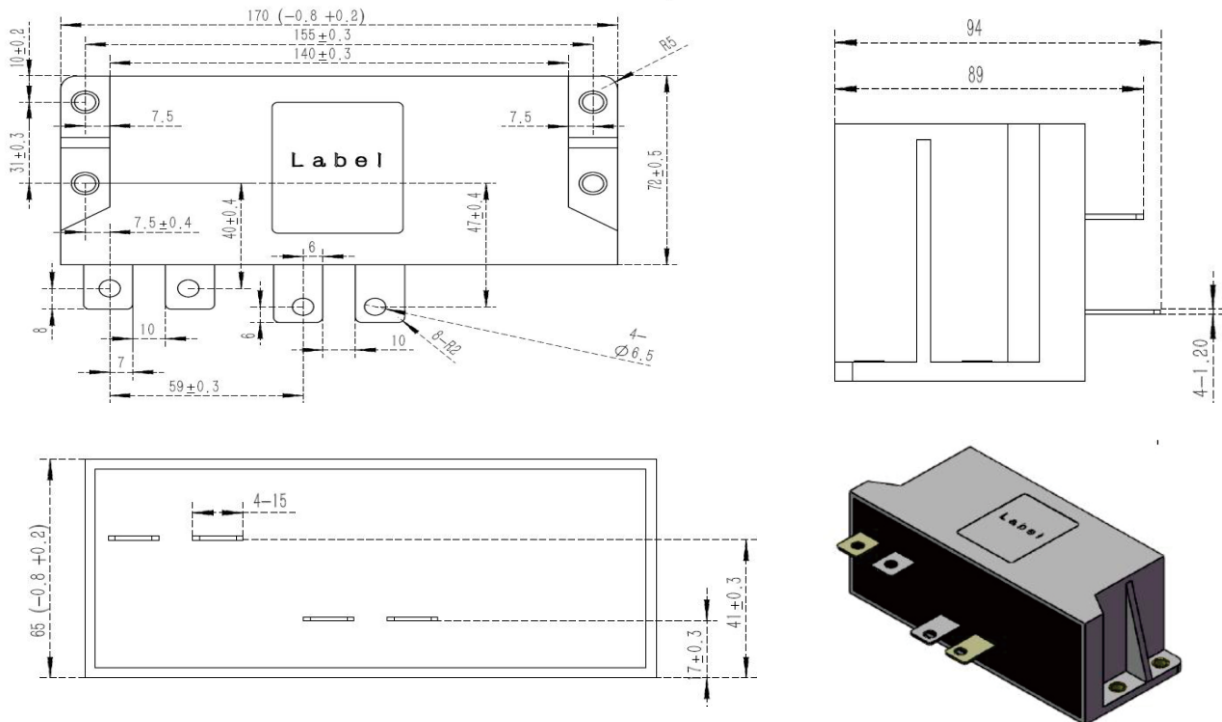
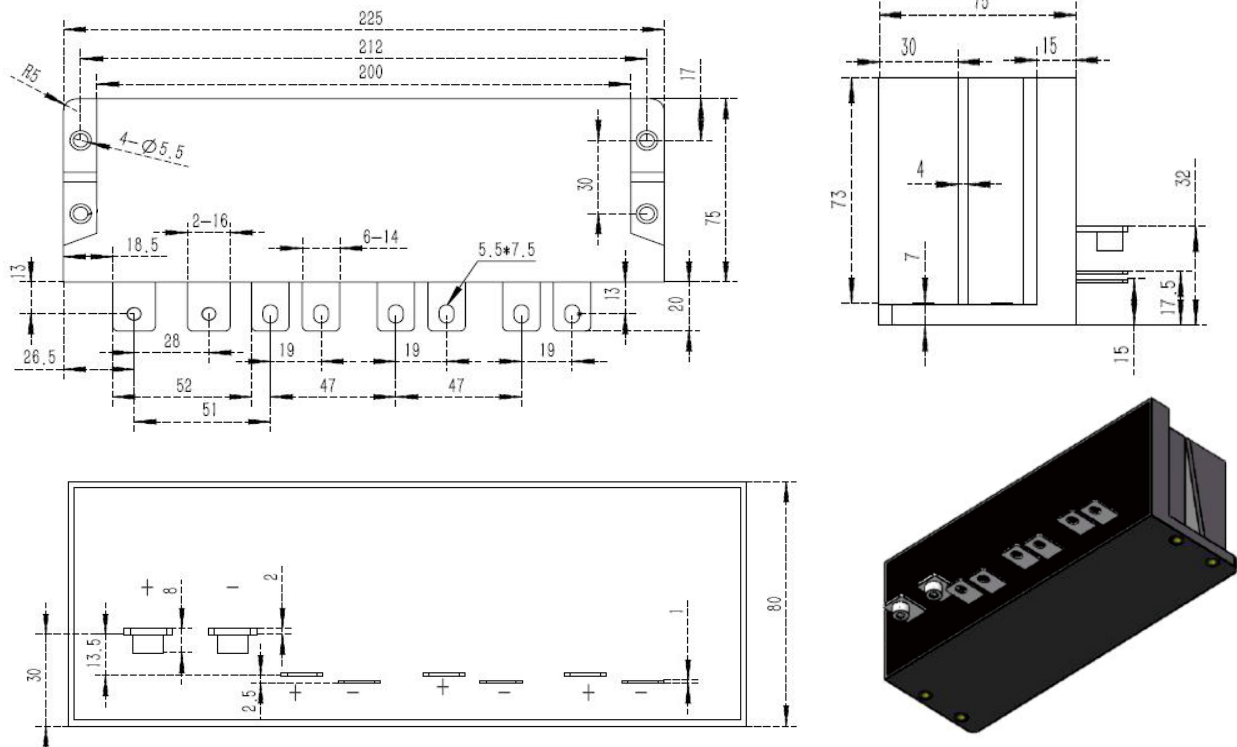
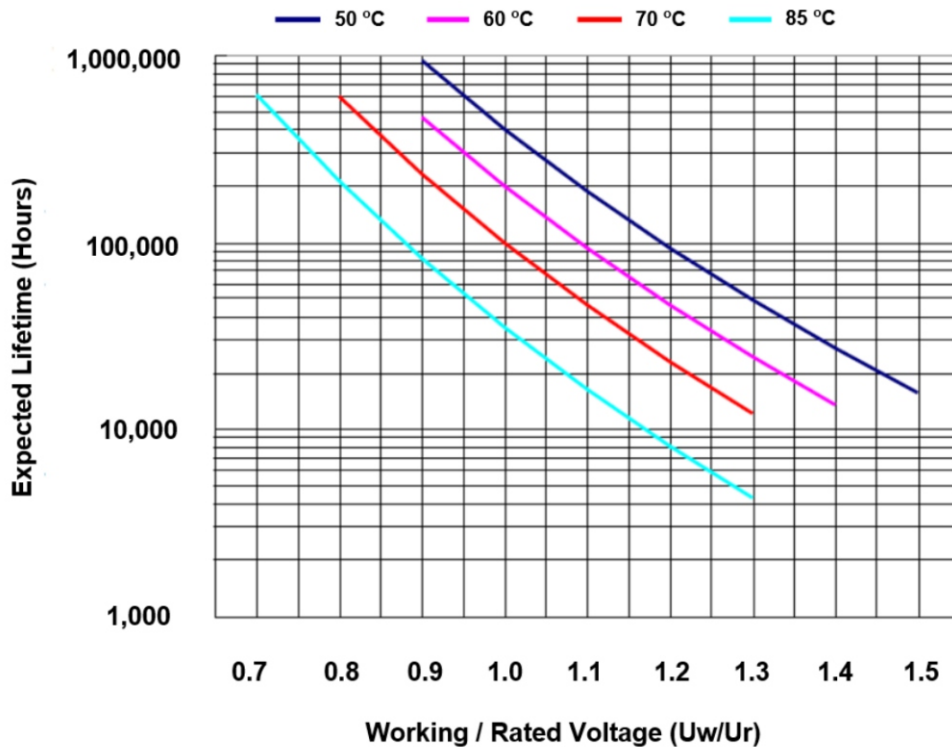


Fig.7a



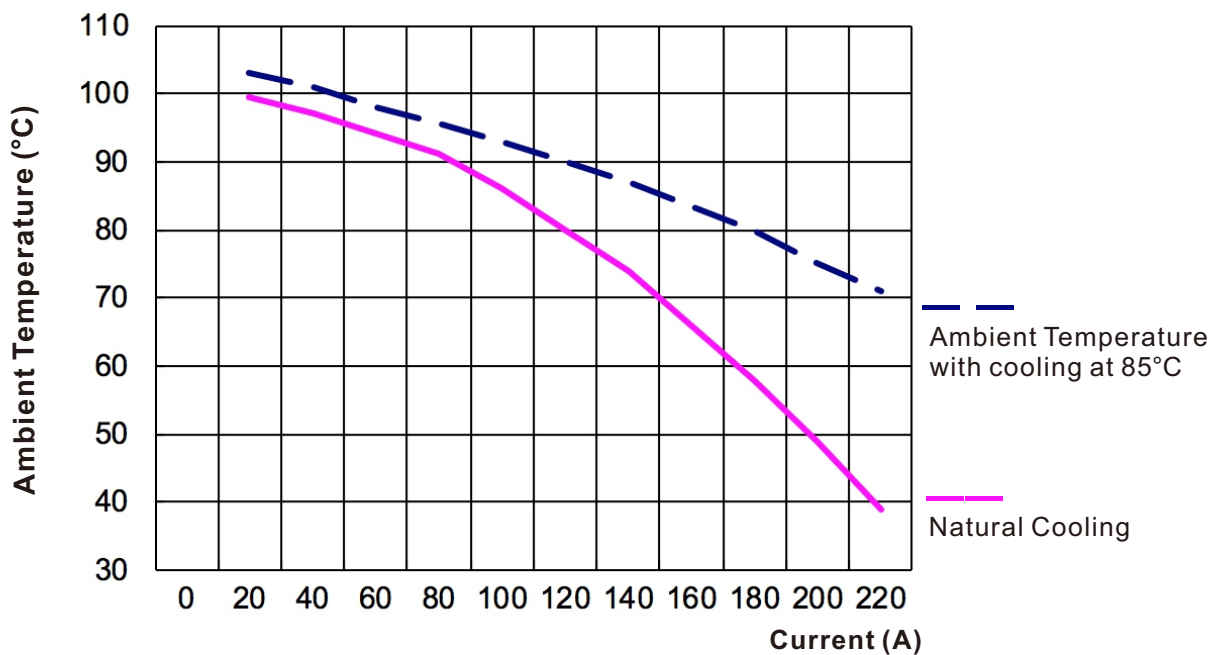
FDE series

Curve 1 Expected lifetime curves



Curve 2. Maximum ambient temperature curve

Taking FDE2HK757X25RNQN for example, others will be available on request.



DC-Link Capacitors

## FDE series

### Classification of tests

#### Routine tests

- I Appearance inspection
- II Dimension check
- III Voltage test between terminals and case
- IV Voltage test between terminals
- V Capacitance and DF measurement
- VI ESL and ESR measurement
- VII Insulation resistance measurement

#### Type tests ( According to IEC 61071 and AEC-Q200-2010 )

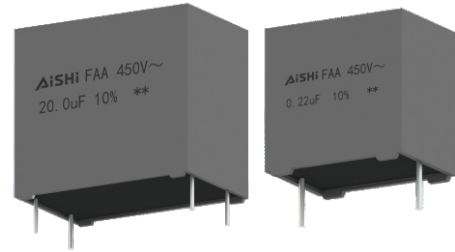
- I Appearance inspection
- II Dimension check
- III Voltage test between terminals and case
- IV Voltage test between terminals
- V Insulation resistance measurement
- VI Vibration and shocks
- VII Surge discharge test
- VIII Biased humidity
- IX Moisture resistance
- X Temperature shock
- XI High temperature storage
- XII Endurance test

# Metallized Polypropylene Film Capacitor (Radial Lead) AC Applications

## FAA series

### Overview

The FAA series is constructed of metallized polypropylene film encapsulated in rectangular plastic box sealed with epoxy resin and 2 or 4 tinned copper wires.



### Applications

- AC output filter
- UPS systems
- Solar inverters
- Motor drives

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

### Specifications

Items	Characteristics
Application	AC Filtering
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C(+85°C observing voltage must be de-rating at 1.5% per °C)
Rated Voltage	160Vac ~ 450Vac
Capacitance Range	0.47μF ~ 50μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤0.002 (0.20%) at 1 KHz. C≤20μF at +25°C ≤0.003 (0.30%) at 1 KHz. C>20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤40 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit



# Metallized Polypropylene Film Capacitor (Radial Lead) AC Applications

## FAA series

### Technical data

Vac	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
160	2.2	32.0	20.0	11.0	27.5	\	7.0	70.4	15.3	24	20.0	32	0.8	FAA16K225G182GL5
160	3.3	32.0	22.0	13.0	27.5	\	7.0	105.6	11.3	24	27.1	32	0.8	FAA16K335G212GL5
160	5.0	32.0	28.0	14.0	27.5	\	7.0	160.0	8.8	26	34.8	32	0.8	FAA16K505G262GL5
160	10	32.0	33.0	18.0	27.5	\	7.0	320.0	6.8	26	45.0	32	0.8	FAA16K106G342GL5
160	10	42.5	37.0	28.0	37.5	10.2	12.0	220.0	7.2	30	14.5	22	1.2	FAA16K106K374KB5
160	20	42.5	37.0	28.0	37.5	10.2	12.0	440.0	6.9	30	15.1	22	1.2	FAA16K206K374KB5
160	30	42.5	45.0	30.0	37.5	20.3	12.0	660.0	7.4	30	14.1	22	1.2	FAA16K306K424KD5
160	40	57.5	45.0	30.0	52.5	20.3	12.0	640.0	7.6	35	13.7	16	1.2	FAA16K406M164MD5
160	50	57.5	50.0	35.0	52.5	20.3	12.0	800.0	7.5	35	13.9	16	1.2	FAA16K506M204MD5
250	1.0	32.0	20.0	11.0	27.5	\	8.0	40.0	14.0	24	16.7	40	0.8	FAA25K105G182GL5
250	1.5	32.0	20.0	11.0	27.5	\	8.0	60.0	10.0	24	23.4	40	0.8	FAA25K155G182GL5
250	2.0	32.0	22.0	13.0	27.5	\	9.0	80.0	8.2	24	22.6	40	0.8	FAA25K205G212GL5
250	3.3	32.0	28.0	14.0	27.5	\	9.0	132.0	6.2	26	29.9	40	0.8	FAA25K335G262GL5
250	4.0	32.0	33.0	18.0	27.5	\	9.0	160.0	5.9	26	31.4	40	0.8	FAA25K405G342GL5
250	5.0	32.0	33.0	18.0	27.5	\	9.0	200.0	5.2	26	35.6	40	0.8	FAA25K505G342GL5
250	6.8	42.5	37.0	22.0	37.5	10.2	14.0	204.0	4.9	28	15.6	30	1.2	FAA25K685K274KB5
250	10	42.5	40.0	20.0	37.5	10.2	14.0	300.0	5.6	30	13.7	30	1.2	FAA25K106K244KB5
250	15	42.5	37.0	28.0	37.5	10.2	14.0	450.0	5.2	30	14.7	30	1.2	FAA25K156K374KB5
250	20	42.5	45.0	30.0	37.5	20.3	14.0	600.0	4.8	30	15.9	30	1.2	FAA25K206K424KD5
250	25	57.5	45.0	30.0	52.5	20.3	14.0	625.0	5.7	35	13.4	25	1.2	FAA25K256M164MD5
250	30	57.5	45.0	30.0	52.5	20.3	14.0	750.0	5.3	35	14.4	25	1.2	FAA25K306M164MD5
250	35	57.5	50.0	35.0	52.5	20.3	14.0	875.0	5.5	35	13.9	25	1.2	FAA25K356M204MD5
250	40	57.5	50.0	35.0	52.5	20.3	14.0	1,000.0	5.2	35	14.7	25	1.2	FAA25K406M204MD5
275	1.0	32.0	20.0	11.0	27.5	\	8.0	40.0	13.0	24	18.0	40	0.8	FAA27K105G182GL5
275	3.3	32.0	33.0	18.0	27.5	\	9.0	132.0	6.2	26	29.9	40	0.8	FAA27K335G342GL5
275	6.8	32.0	37.0	22.0	27.5	\	9.0	272.0	4.7	28	39.4	40	0.8	FAA27K685G402GL5
275	10	42.5	40.0	20.0	37.5	10.2	14.0	300.0	5.9	30	13.0	30	1.2	FAA27K106K244KB5
275	15	42.5	45.0	30.0	37.5	20.3	14.0	450.0	5.1	30	15.0	30	1.2	FAA27K156K424KD5
275	20	57.5	45.0	30.0	52.5	20.3	14.0	500.0	6.0	35	12.8	25	1.2	FAA27K206M164MD5
275	30	57.5	50.0	35.0	52.5	20.3	14.0	750.0	5.3	35	14.4	25	1.2	FAA27K306M204MD5
350	0.68	32.0	20.0	11.0	27.5	\	8.0	30.6	15.0	24	15.6	45	0.8	FAA35K684G182GL5
350	2.0	32.0	33.0	18.0	27.5	\	9.0	90.0	7.3	26	25.4	45	0.8	FAA35K205G342GL5
350	2.2	32.0	33.0	18.0	27.5	\	9.0	99.0	6.9	26	26.8	45	0.8	FAA35K225G342GL5
350	3.3	32.0	37.0	22.0	27.5	\	9.0	148.5	5.7	28	32.5	45	0.8	FAA35K335G402GL5
350	4.7	42.5	40.0	20.0	37.5	10.2	14.0	159.8	6.9	30	11.1	34	1.2	FAA35K475K244KB5
350	5.0	42.5	40.0	20.0	37.5	10.2	14.0	170.0	6.8	30	11.3	34	1.2	FAA35K505K244KB5
350	6.8	42.5	37.0	28.0	37.5	10.2	14.0	231.2	6.2	30	12.3	34	1.2	FAA35K685K374KB5
350	10	42.5	45.0	30.0	37.5	20.3	14.0	340.0	5.3	30	14.4	34	1.2	FAA35K106K424KD5
350	12	57.5	45.0	30.0	52.5	20.3	14.0	336.0	6.8	35	11.3	28	1.2	FAA35K126M164MD5
350	20	57.5	50.0	35.0	52.5	20.3	14.0	560.0	5.9	35	13.0	28	1.2	FAA35K206M204MD5
400	0.47	32.0	20.0	11.0	27.5	\	7.0	23.5	18.6	24	16.5	50	0.8	FAA40K474G182GL5
400	1.0	32.0	28.0	14.0	27.5	\	9.0	50.0	10.3	26	18.0	50	0.8	FAA40K105G262GL5
400	1.5	32.0	33.0	18.0	27.5	\	9.0	75.0	8.1	26	22.9	50	0.8	FAA40K155G342GL5
400	2.2	32.0	33.0	18.0	27.5	\	9.0	110.0	6.4	26	28.9	50	0.8	FAA40K225G342GL5
400	3.0	32.0	37.0	22.0	27.5	\	9.0	150.0	5.7	28	32.5	50	0.8	FAA40K305G402GL5
400	5.0	42.5	37.0	28.0	37.5	10.2	14.0	200.0	6.2	30	12.3	40	1.2	FAA40K505K374KB5
400	10	57.5	45.0	30.0	52.5	20.3	14.0	350.0	6.9	35	11.1	35	1.2	FAA40K106M164MD5
400	15	57.5	50.0	35.0	52.5	20.3	14.0	525.0	6.1	35	12.5	35	1.2	FAA40K156M204MD5
450	0.47	32.0	22.0	13.0	27.5	\	8.0	25.9	15.7	24	14.9	55	0.8	FAA45K474G212GL5
450	1.0	32.0	33.0	18.0	27.5	\	8.0	55.0	9.2	26	25.5	55	0.8	FAA45K105G342GL5
450	1.5	32.0	37.0	22.0	27.5	\	8.0	82.5	7.3	28	32.1	55	0.8	FAA45K155G402GL5
450	3.3	42.5	37.0	28.0	37.5	10.2	14.0	148.5	7.4	30	10.3	45	1.2	FAA45K335K374KB5
450	4.7	42.5	45.0	30.0	37.5	20.3	14.0	211.5	6.2	30	12.3	45	1.2	FAA45K475K424KD5
450	6.8	57.5	45.0	30.0	52.5	20.3	14.0	258.4	7.5	35	10.2	38	1.2	FAA45K685M164MD5
450	10	57.5	50.0	35.0	52.5	20.3	14.0	380.0	6.6	35	11.6	38	1.2	FAA45K106M204MD5

\* Customized products are available by request, contact us for more details.

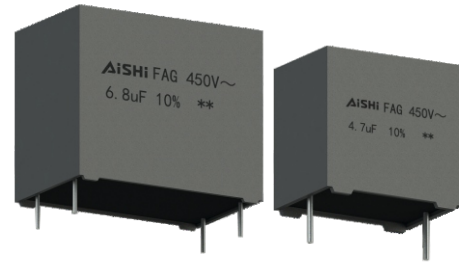
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead, THB\* compliance) AC Applications

## FAG series

### Overview

The FAG series is constructed of metallized polypropylene film encapsulated in rectangular plastic box sealed with epoxy resin and 2 or 4 tinned copper wires.



### Applications

- AC output filter
- UPS systems
- Solar inverters
- Motor drives

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Able to withstand harsh environmental conditions

### Specifications

Items	Characteristics
Application	AC Filtering
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C(+85°C observing voltage must be de-rating at 1.5% per °C)
Rated Voltage	160Vac ~ 450Vac
Capacitance Range	0.47μF ~ 50μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤0.002 (0.20%) at 1 KHz. C≤20μF at +25°C ≤0.003 (0.30%) at 1 KHz. C>20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity (RH) :93% ±2%
	Test duration : 56 days
	Capacitance change :≤ ±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤ ±5% DF change (Δtgδ):≤40 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C ±2°C Relative humidity (RH) :85% ±2%
	Loading Voltage: Rated voltage (50Hz/60Hz)
	Test duration : 1000 hours Capacitance change :≤ ±10%

# Metallized Polypropylene Film Capacitor (Radial Lead, THB\* compliance) AC Applications

## FAQ series

### Technical data

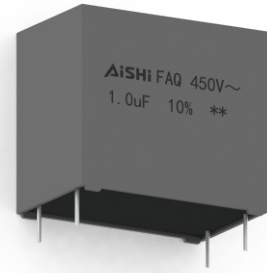
Vac	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
160	2.2	32.0	20.0	11.0	27.5	\	7.0	70	15.3	24	20.0	32	0.8	FAG16K225G182GL5
160	3.3	32.0	22.0	13.0	27.5	\	7.0	106	11.3	24	27.1	32	0.8	FAG16K335G212GL5
160	5	32.0	28.0	14.0	27.5	\	7.0	160	8.8	26	34.8	32	0.8	FAG16K505G262GL5
160	10	32.0	33.0	18.0	27.5	\	7.0	320	6.8	26	45.0	32	0.8	FAG16K106G342GL5
160	10	42.5	37.0	28.0	37.5	10.2	12.0	220	7.2	30	14.5	22	1.2	FAG16K106K374KB5
160	20	42.5	37.0	28.0	37.5	10.2	12.0	440	6.9	30	15.1	22	1.2	FAG16K206K374KB5
160	30	42.5	45.0	30.0	37.5	20.3	12.0	660	7.4	30	14.1	22	1.2	FAG16K306K424KD5
160	40	57.5	45.0	30.0	52.5	20.3	12.0	640	7.6	35	13.7	16	1.2	FAG16K406M164MD5
160	50	57.5	50.0	35.0	52.5	20.3	12.0	800	7.5	35	13.9	16	1.2	FAG16K506M204MD5
250	1.0	32.0	20.0	11.0	27.5	\	8.0	40	14.0	24	16.7	40	0.8	FAG25K105G182GL5
250	1.5	32.0	20.0	11.0	27.5	\	8.0	60	10.0	24	23.4	40	0.8	FAG25K155G182GL5
250	2.0	32.0	22.0	13.0	27.5	\	9.0	80	8.2	24	22.6	40	0.8	FAG25K205G212GL5
250	3.3	32.0	28.0	14.0	27.5	\	9.0	132	6.2	26	29.9	40	0.8	FAG25K335G262GL5
250	4.0	32.0	33.0	18.0	27.5	\	9.0	160	5.9	26	31.4	40	0.8	FAG25K405G342GL5
250	5.0	32.0	33.0	18.0	27.5	\	9.0	200	5.2	26	35.6	40	0.8	FAG25K505G342GL5
250	7	42.5	37.0	22.0	37.5	10.2	14.0	204	4.9	28	15.6	30	1.2	FAG25K685K274KB5
250	10	42.5	40.0	20.0	37.5	10.2	14.0	300	5.6	30	13.7	30	1.2	FAG25K106K244KB5
250	15	42.5	37.0	28.0	37.5	10.2	14.0	450	5.2	30	14.7	30	1.2	FAG25K156K374KB5
250	20	42.5	45.0	30.0	37.5	20.3	14.0	600	4.8	30	15.9	30	1.2	FAG25K206K424KD5
250	25	57.5	45.0	30.0	52.5	20.3	14.0	625	5.7	35	13.4	25	1.2	FAG25K256M164MD5
250	30	57.5	45.0	30.0	52.5	20.3	14.0	750	5.3	35	14.4	25	1.2	FAG25K306M164MD5
250	35	57.5	50.0	35.0	52.5	20.3	14.0	875	5.5	35	13.9	25	1.2	FAG25K356M204MD5
250	40	57.5	50.0	35.0	52.5	20.3	14.0	1000	5.2	35	14.7	25	1.2	FAG25K406M204MD5
275	1.0	32.0	20.0	11.0	27.5	\	8.0	40	13.0	24	18.0	40	0.8	FAG27K105G182GL5
275	3.3	32.0	33.0	18.0	27.5	\	9.0	132	6.2	26	29.9	40	0.8	FAG27K335G342GL5
275	7	32.0	37.0	22.0	27.5	\	9.0	272	4.7	28	39.4	40	0.8	FAG27K685G402GL5
275	10	42.5	40.0	20.0	37.5	10.2	14.0	300	5.9	30	13.0	30	1.2	FAG27K106K244KB5
275	15	42.5	45.0	30.0	37.5	20.3	14.0	450	5.1	30	15.0	30	1.2	FAG27K156K424KD5
275	20	57.5	45.0	30.0	52.5	20.3	14.0	500	6.0	35	12.8	25	1.2	FAG27K206M164MD5
275	30	57.5	50.0	35.0	52.5	20.3	14.0	750	5.3	35	14.4	25	1.2	FAG27K306M204MD5
350	0.68	32.0	20.0	11.0	27.5	\	8.0	31	15.0	24	15.6	45	0.8	FAG35K684G182GL5
350	2.0	32.0	33.0	18.0	27.5	\	9.0	90	7.3	26	25.4	45	0.8	FAG35K205G342GL5
350	2.2	32.0	33.0	18.0	27.5	\	9.0	99	6.9	26	26.8	45	0.8	FAG35K225G342GL5
350	3.3	32.0	37.0	22.0	27.5	\	9.0	149	5.7	28	32.5	45	0.8	FAG35K335G402GL5
350	4.7	42.5	40.0	20.0	37.5	10.2	14.0	160	6.9	30	11.1	34	1.2	FAG35K475K244KB5
350	5	42.5	40.0	20.0	37.5	10.2	14.0	170	6.8	30	11.3	34	1.2	FAG35K505K244KB5
350	7	42.5	37.0	28.0	37.5	10.2	14.0	231	6.2	30	12.3	34	1.2	FAG35K685K374KB5
350	10	42.5	45.0	30.0	37.5	20.3	14.0	340	5.3	30	14.4	34	1.2	FAG35K106K424KD5
350	12	57.5	45.0	30.0	52.5	20.3	14.0	336	6.8	35	11.3	28	1.2	FAG35K126M164MD5
350	20	57.5	50.0	35.0	52.5	20.3	14.0	560	5.9	35	13.0	28	1.2	FAG35K206M204MD5
400	0.47	32.0	20.0	11.0	27.5	\	7.0	24	18.6	24	16.5	50	0.8	FAG40K474G182GL5
400	1.0	32.0	28.0	14.0	27.5	\	9.0	50	10.3	26	18.0	50	0.8	FAG40K105G262GL5
400	1.5	32.0	33.0	18.0	27.5	\	9.0	75	8.1	26	22.9	50	0.8	FAG40K155G342GL5
400	2	32.0	33.0	18.0	27.5	\	9.0	110	6.4	26	28.9	50	0.8	FAG40K225G342GL5
400	3	32.0	37.0	22.0	27.5	\	9.0	150	5.7	28	32.5	50	0.8	FAG40K305G402GL5
400	5	42.5	37.0	28.0	37.5	10.2	14.0	200	6.2	30	12.3	40	1.2	FAG40K505K374KB5
400	10	57.5	45.0	30.0	52.5	20.3	14.0	350	6.9	35	11.1	35	1.2	FAG40K106M164MD5
400	15	57.5	50.0	35.0	52.5	20.3	14.0	525	6.1	35	12.5	35	1.2	FAG40K156M204MD5
450	0.47	32.0	22.0	13.0	27.5	\	8.0	26	15.7	24	14.9	55	0.8	FAG45K474G212GL5
450	1.0	32.0	33.0	18.0	27.5	\	8.0	55	9.2	26	25.5	55	0.8	FAG45K105G342GL5
450	1.5	32.0	37.0	22.0	27.5	\	8.0	83	7.3	28	32.1	55	0.8	FAG45K155G402GL5
450	3.3	42.5	37.0	28.0	37.5	10.2	14.0	149	7.4	30	10.3	45	1.2	FAG45K335K374KB5
450	4.7	42.5	45	30	37.5	20.3	14	212	6.2	30	12.3	45	1.2	FAG45K475K424KD5
450	6.8	57.5	45	30	52.5	20.3	14	258	7.5	35	10.2	38	1.2	FAG45K685M164MD5
450	10	57.5	50	35	52.5	20.3	14	380	6.6	35	11.6	38	1.2	FAG45K106M204MD5

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade AC Filter Capacitor

## FAQ series



### Overview

The FAQ series is constructed of metallized polypropylene film encapsulated in rectangular plastic box sealed with epoxy resin and 2 or 4 tinned copper wires. These FAQ series are qualified in accordance to AEC-Q200 requirement.

### Applications

- AC output filter
- UPS systems
- Solar inverters
- Motor drives
- Industrial and automotive applications

### Features

- Automotive Grade (AEC-Q200)
- Self-healing property
- Low losses
- High contact reliability, low losses
- Able to withstand harsh environmental conditions

### Specifications

Items	Characteristics
Application	AC Filtering
Reference Standard	IEC 61071, AEC-Q200D
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40 ~ +105°C (+85°C observing voltage must be de-rating at 1.5% per °C)
Rated Voltage	160Vac ~ 450Vac
Capacitance Range	0.47μF ~ 40μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	<= 0.002 (0.20%) at 1 KHz. C≤20μF at +25°C <= 0.003 (0.30%) at 1 KHz. C>20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0kVac 50 Hz for 10 sec at +25°C
Insulation Resistance	IR x C≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Tinned copper wires, standard lead wire length 5 ±1mm
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75% RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C±2°C Relative humidity (RH) :93% ±2% Test duration: 56 days Capacitance change: ≤5% DF change (Δtgδ): ≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +85°C±2°C Voltage applied: 1.25 X V <sub>R</sub> (a.c.) Test duration: 1000 hours Capacitance change: ≤5% DF change (Δtgδ): ≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance: Temperature: +85°C±2°C Relative humidity (RH) :85% ±2% Loading Voltage: Rate voltage (50Hz/60Hz); Test duration: 1000 hours Capacitance change: ≤10%

# Metallized Polypropylene Film Capacitor (Radial Lead) Automotive Grade AC Filter Capacitor

## FAQ series

### Technical data

Vac	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W mm	H mm	T mm	P mm	P1 mm								
160	2.2	32.0	20.0	11.0	27.5	\	7.0	70	15.3	24	20.0	32	0.8	FAQ16K225G182GL5
160	3.3	32.0	22.0	13.0	27.5	\	7.0	106	11.3	24	27.1	32	0.8	FAQ16K335G212GL5
160	5	32.0	28.0	14.0	27.5	\	7.0	160	8.8	26	34.8	32	0.8	FAQ16K505G262GL5
160	10	32.0	33.0	18.0	27.5	\	7.0	320	6.8	26	45.0	32	0.8	FAQ16K106G342GL5
160	10	42.5	37.0	28.0	37.5	10.2	12.0	220	7.2	30	14.5	22	1.2	FAQ16K106K374KB5
160	20	42.5	37.0	28.0	37.5	10.2	12.0	440	6.9	30	15.1	22	1.2	FAQ16K206K374KB5
160	30	42.5	45.0	30.0	37.5	20.3	12.0	660	7.4	30	14.1	22	1.2	FAQ16K306K424KD5
160	40	57.5	45.0	30.0	52.5	20.3	12.0	640	7.6	35	13.7	16	1.2	FAQ16K406M164MD5
160	50	57.5	50.0	35.0	52.5	20.3	12.0	800	7.5	35	13.9	16	1.2	FAQ16K506M204MD5
250	1.0	32.0	20.0	11.0	27.5	\	8.0	40	14.0	24	16.7	40	0.8	FAQ25K105G182GL5
250	1.5	32.0	20.0	11.0	27.5	\	8.0	60	10.0	24	23.4	40	0.8	FAQ25K155G182GL5
250	2.0	32.0	22.0	13.0	27.5	\	9.0	80	8.2	24	22.6	40	0.8	FAQ25K205G212GL5
250	3.3	32.0	28.0	14.0	27.5	\	9.0	132	6.2	26	29.9	40	0.8	FAQ25K335G262GL5
250	4.0	32.0	33.0	18.0	27.5	\	9.0	160	5.9	26	31.4	40	0.8	FAQ25K405G342GL5
250	5.0	32.0	33.0	18.0	27.5	\	9.0	200	5.2	26	35.6	40	0.8	FAQ25K505G342GL5
250	7	42.5	37.0	22.0	37.5	10.2	14.0	204	4.9	28	15.6	30	1.2	FAQ25K685K274KB5
250	10	42.5	40.0	20.0	37.5	10.2	14.0	300	5.6	30	13.7	30	1.2	FAQ25K106K244KB5
250	15	42.5	37.0	28.0	37.5	10.2	14.0	450	5.2	30	14.7	30	1.2	FAQ25K156K374KB5
250	20	42.5	45.0	30.0	37.5	20.3	14.0	600	4.8	30	15.9	30	1.2	FAQ25K206K424KD5
250	25	57.5	45.0	30.0	52.5	20.3	14.0	625	5.7	35	13.4	25	1.2	FAQ25K256M164MD5
250	30	57.5	45.0	30.0	52.5	20.3	14.0	750	5.3	35	14.4	25	1.2	FAQ25K306M164MD5
250	35	57.5	50.0	35.0	52.5	20.3	14.0	875	5.5	35	13.9	25	1.2	FAQ25K356M204MD5
250	40	57.5	50.0	35.0	52.5	20.3	14.0	1000	5.2	35	14.7	25	1.2	FAQ25K406M204MD5
275	1.0	32.0	20.0	11.0	27.5	\	8.0	40	13.0	24	18.0	40	0.8	FAQ27K105G182GL5
275	3.3	32.0	33.0	18.0	27.5	\	9.0	132	6.2	26	29.9	40	0.8	FAQ27K335G342GL5
275	7	32.0	37.0	22.0	27.5	\	9.0	272	4.7	28	39.4	40	0.8	FAQ27K685G402GL5
275	10	42.5	40.0	20.0	37.5	10.2	14.0	300	5.9	30	13.0	30	1.2	FAQ27K106K244KB5
275	15	42.5	45.0	30.0	37.5	20.3	14.0	450	5.1	30	15.0	30	1.2	FAQ27K156K424KD5
275	20	57.5	45.0	30.0	52.5	20.3	14.0	500	6.0	35	12.8	25	1.2	FAQ27K206M164MD5
275	30	57.5	50.0	35.0	52.5	20.3	14.0	750	5.3	35	14.4	25	1.2	FAQ27K306M204MD5
350	0.68	32.0	20.0	11.0	27.5	\	8.0	31	15.0	24	15.6	45	0.8	FAQ35K684G182GL5
350	2.0	32.0	33.0	18.0	27.5	\	9.0	90	7.3	26	25.4	45	0.8	FAQ35K205G342GL5
350	2.2	32.0	33.0	18.0	27.5	\	9.0	99	6.9	26	26.8	45	0.8	FAQ35K225G342GL5
350	3.3	32.0	37.0	22.0	27.5	\	9.0	149	5.7	28	32.5	45	0.8	FAQ35K335G402GL5
350	4.7	42.5	40.0	20.0	37.5	10.2	14.0	160	6.9	30	11.1	34	1.2	FAQ35K475K244KB5
350	5	42.5	40.0	20.0	37.5	10.2	14.0	170	6.8	30	11.3	34	1.2	FAQ35K505K244KB5
350	7	42.5	37.0	28.0	37.5	10.2	14.0	231	6.2	30	12.3	34	1.2	FAQ35K685K374KB5
350	10	42.5	45.0	30.0	37.5	20.3	14.0	340	5.3	30	14.4	34	1.2	FAQ35K106K424KD5
350	12	57.5	45.0	30.0	52.5	20.3	14.0	336	6.8	35	11.3	28	1.2	FAQ35K126M164MD5
350	20	57.5	50.0	35.0	52.5	20.3	14.0	560	5.9	35	13.0	28	1.2	FAQ35K206M204MD5
400	0.47	32.0	20.0	11.0	27.5	\	7.0	24	18.6	24	16.5	50	0.8	FAQ40K474G182GL5
400	1.0	32.0	28.0	14.0	27.5	\	9.0	50	10.3	26	18.0	50	0.8	FAQ40K105G262GL5
400	1.5	32.0	33.0	18.0	27.5	\	9.0	75	8.1	26	22.9	50	0.8	FAQ40K155G342GL5
400	2	32.0	33.0	18.0	27.5	\	9.0	110	6.4	26	28.9	50	0.8	FAQ40K225G342GL5
400	3	32.0	37.0	22.0	27.5	\	9.0	150	5.7	28	32.5	50	0.8	FAQ40K305G402GL5
400	5	42.5	37.0	28.0	37.5	10.2	14.0	200	6.2	30	12.3	40	1.2	FAQ40K505K374KB5
400	10	57.5	45.0	30.0	52.5	20.3	14.0	350	6.9	35	11.1	35	1.2	FAQ40K106M164MD5
400	15	57.5	50.0	35.0	52.5	20.3	14.0	525	6.1	35	12.5	35	1.2	FAQ40K156M204MD5
450	0.47	32.0	22.0	13.0	27.5	\	8.0	26	15.7	24	14.9	55	0.8	FAQ45K474G212GL5
450	1.0	32.0	33.0	18.0	27.5	\	8.0	55	9.2	26	25.5	55	0.8	FAQ45K105G342GL5
450	1.5	32.0	37.0	22.0	27.5	\	8.0	83	7.3	28	32.1	55	0.8	FAQ45K155G402GL5
450	3.3	42.5	37.0	28.0	37.5	10.2	14.0	149	7.4	30	10.3	45	1.2	FAQ45K335K374KB5
450	4.7	42.5	45	30	37.5	20.3	14	212	6.2	30	12.3	45	1.2	FAQ45K475K424KD5
450	6.8	57.5	45	30	52.5	20.3	14	258	7.5	35	10.2	38	1.2	FAQ45K685M164MD5
450	10	57.5	50	35	52.5	20.3	14	380	6.6	35	11.6	38	1.2	FAQ45K106M204MD5

\* Customized products are available by request, contact us for more details.

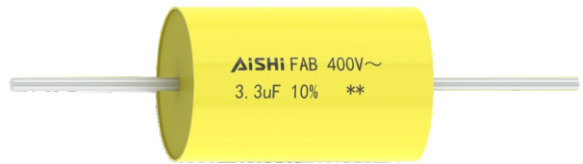
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Axial Lead) AC Applications

## FAB series

### Overview

The FAB series is constructed of metallized polypropylene film with polyester tape wrapping filled with resin and tinned copper wires.



### Applications

- AC output filter
- UPS systems
- Solar inverters
- Motor drives

### Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability

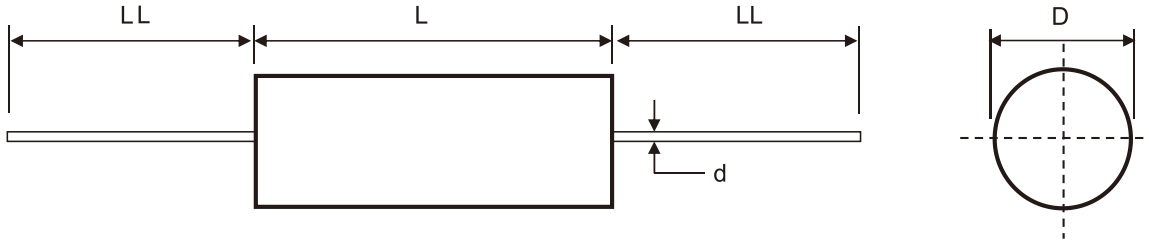
### Specifications

Items	Characteristics
Application	AC Filtering
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C(+85°C observing voltage must be de-rating at 1.5% per °C)
Rated Voltage	160Vac ~ 450Vac
Capacitance Range	0.15μF ~ 40μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤0.002 (0.20%) at 1 KHz. C≤20μF at +25°C ≤0.003 (0.30%) at 1 KHz. C>20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Polyester wrapping with epoxy resin fill
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤40 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Axial Lead) AC Applications

## FAB series

### ■ Outline Drawing



### ■ Dimensions - Lead wires

D	L	d	LL
(mm) max	(mm) max	(mm) $\pm 0.1$	(mm) min
11.0	22	0.8	35
9.5	28	0.8	35
10 ~ 13	34	0.8	35
13.5 ~ 20.5	34	1.0	35
18 ~ 22.5	44	1.0	35
23.5 ~ 33	44	1.2	35
15 ~ 27	48	1.0	35
28 ~ 35	58	1.2	35

# Metallized Polypropylene Film Capacitor (Axial Lead) AC Applications

## FAB series

### Technical data

Vac	Cap Value μF	Dimensions		Irms 10KHz 70°C A	Peak Current A	ESR 10K Typical mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead wire mm	Part Number
		D mm max	L mm max								
160	1.0	10.0	34.0	6.0	60.0	8.7	12.0	47.9	30	0.8	FAB16K105034XNLB
160	2.2	11.5	34.0	6.0	66.0	14.2	20.0	29.3	30	0.8	FAB16K225034XNLB
160	2.5	12.0	34.0	7.0	75.0	12.7	20.0	24.1	30	0.8	FAB16K255034XNLB
160	3.0	13.5	34.0	8.0	90.0	10.7	20.0	21.9	30	1.0	FAB16K305034XNLB
160	3.3	14.0	34.0	9.0	99.0	9.8	20.0	18.9	30	1.0	FAB16K335034XNLB
160	4.0	15.5	34.0	9.0	120.0	8.3	20.0	22.3	30	1.0	FAB16K405034XNLB
160	5.0	17.0	34.0	9.0	150.0	7.0	20.0	26.5	30	1.0	FAB16K505034XNLB
160	6.8	19.5	34.0	9.0	204.0	5.7	20.0	32.5	30	1.0	FAB16K685034XNLB
160	8.0	18.0	48.0	9.0	160.0	6.9	25.0	26.8	20	1.0	FAB16K805048XNLB
160	10	20.0	48.0	9.0	200.0	12.4	25.0	14.9	20	1.0	FAB16K106048XNLB
160	15	24.0	48.0	12.0	300.0	5.1	25.0	20.4	20	1.2	FAB16K156048XNLB
160	18	26.0	48.0	12.0	360.0	4.4	25.0	23.7	20	1.2	FAB16K186048XNLB
160	20	28.0	48.0	12.0	400.0	10.7	25.0	9.7	20	1.2	FAB16K206048XNLB
160	25	31.0	48.0	12.0	500.0	4.0	25.0	26	20	1.2	FAB16K256048XNLB
160	30	29.0	58.0	12.0	450.0	5.2	30.0	20	15	1.2	FAB16K306058XNLB
160	35	33.5	58.0	12.0	525.0	4.6	30.0	22.6	15	1.2	FAB16K356058XNLB
160	40	36.0	58.0	12.0	600.0	8.8	30.0	11.8	15	1.2	FAB16K406058XNLB
250	0.47	9.5	34.0	6.0	28.2	14.4	15.0	28.9	60	0.8	FAB25K474034XNLB
250	0.68	10.0	34.0	6.0	30.6	15.2	20.0	27.4	45	0.8	FAB25K684034XNLB
250	0.82	11.0	34.0	6.5	36.9	13.8	20.0	26.5	45	0.8	FAB25K824034XNLB
250	1.0	12.0	34.0	7.0	45.0	10.8	20.0	28.3	45	0.8	FAB25K105034XNLB
250	1.5	14.5	34.0	9.0	67.5	75.0	20.0	24.7	45	1.0	FAB25K155034XNLB
250	2.0	16.5	34.0	9.0	90.0	6.1	20.0	30.4	45	1.0	FAB25K205034XNLB
250	2.2	17.5	34.0	9.0	99.0	5.7	20.0	32.5	45	1.0	FAB25K225034XNLB
250	2.5	18.5	34.0	9.0	112.5	5.2	20.0	35.6	45	1.0	FAB25K255034XNLB
250	3.0	20.0	34.0	9.0	135.0	4.7	20.0	39.4	45	1.0	FAB25K305034XNLB
250	3.3	18.0	48.0	9.0	99.0	6.8	25.0	27.2	30	1.0	FAB25K335048XNLB
250	4.0	19.5	48.0	9.0	120.0	6.0	25.0	30.9	30	1.0	FAB25K405048XNLB
250	4.7	21.0	48.0	9.0	141.0	5.3	25.0	34.9	30	1.0	FAB25K475048XNLB
250	5.0	21.5	48.0	9.0	150.0	5.2	25.0	35.6	30	1.0	FAB25K505048XNLB
250	6.8	25.0	48.0	12.0	204.0	4.2	25.0	24.8	30	1.2	FAB25K685048XNLB
250	10	30.0	48.0	12.0	300.0	3.5	25.0	29.8	30	1.2	FAB25K106048XNLB
250	15	31.5	58.0	12.0	300.0	6.2	30.0	16.8	20	1.2	FAB25K156058XNLB
250	20	35.0	58.0	12.0	400.0	5.2	30.0	20	20	1.2	FAB25K206058XNLB
330	0.47	11.0	34.0	6.0	28.2	17.0	20.0	24.5	60	0.8	FAB33K474034XNLB
330	0.68	13.0	34.0	7.0	40.8	12.2	20.0	25.1	60	0.8	FAB33K684034XNLB
330	1.0	15.5	34.0	9.0	60.0	8.6	20.0	21.5	60	1.0	FAB33K105034XNLB
330	2.0	18.5	48.0	9.0	80.0	8.2	25.0	22.6	40	1.0	FAB33K205048XNLB
330	2.2	19.5	48.0	9.0	88.0	6.8	25.0	27.2	40	1.0	FAB33K225048XNLB
330	3.0	22.5	48.0	9.0	120.0	6.2	25.0	29.9	40	1.0	FAB33K305048XNLB
330	3.3	23.5	48.0	12.0	132.0	5.6	25.0	18.6	40	1.2	FAB33K335048XNLB
330	4.0	25.5	48.0	12.0	160.0	4.9	25.0	21.3	40	1.2	FAB33K405048XNLB
330	4.7	27.5	48.0	12.0	188.0	4.6	25.0	22.6	40	1.2	FAB33K475048XNLB
330	5.0	28.5	48.0	12.0	200.0	4.4	25.0	23.7	40	1.2	FAB33K505048XNLB
330	6.8	28.5	58.0	12.0	204.0	8.8	30.0	11.8	30	1.2	FAB33K685058XNLB
330	10	34.5	58.0	12.0	300.0	6.9	30.0	15.1	30	1.2	FAB33K106058XNLB

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.



## Metallized Polypropylene Film Capacitor (Axial Lead) AC Applications

### FAB series

#### ■ Technical data

Vac	Cap Value μF	Dimensions		I <sub>rms</sub> 10KHz 70°C A	Peak Current A	ESR 10K Typical mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		D mm max	L mm max								
400	0.47	14.5	34.0	8.0	37.6	12.4	20.0	18.9	80	1.0	FAB40K474034XNLB
400	0.68	17.0	34.0	9.0	54.4	9.1	20.0	20.4	80	1.0	FAB40K684034XNLB
400	1.0	20.5	34.0	9.0	80.0	6.8	20.0	27.2	80	1.0	FAB40K105034XNLB
400	1.5	20.5	48.0	9.0	90.0	8.3	25.0	22.3	60	1.0	FAB40K155048XNLB
400	2.0	23.5	48.0	12.0	120.0	6.5	25.0	16	60	1.2	FAB40K205048XNLB
400	2.2	24.5	48.0	12.0	132.0	6.1	25.0	17.1	60	1.2	FAB40K225048XNLB
400	3.0	28.5	48.0	12.0	180.0	5.1	25.0	20.4	60	1.2	FAB40K305048XNLB
400	3.3	30.0	48.0	12.0	198.0	4.8	25.0	21.7	60	1.2	FAB40K335048XNLB
400	4.0	33.0	48.0	12.0	240.0	4.6	25.0	22.6	60	1.2	FAB40K405048XNLB
400	4.7	29.5	58.0	12.0	188.0	10.3	30.0	10.1	40	1.2	FAB40K475058XNLB
400	5.0	30.5	58.0	12.0	200.0	9.8	30.0	10.6	40	1.2	FAB40K505058XNLB
400	6.8	35.0	58.0	12.0	272.0	7.9	30.0	13.2	40	1.2	FAB40K685058XNLB
450	0.15	10.0	34.0	5.0	31.5	18.9	20.0	31.7	210	0.8	FAB45K154034XNLB
450	0.22	12.0	34.0	7.0	46.2	13.4	20.0	22.8	210	0.8	FAB45K224034XNLB
450	0.33	14.5	34.0	9.0	69.3	9.2	20.0	20.1	210	1.0	FAB45K334034XNLB
450	0.47	17.0	34.0	9.0	98.7	7.0	20.0	26.5	210	1.0	FAB45K474034XNLB
450	0.68	20.5	34.0	9.0	142.8	5.5	20.0	33.7	210	1.0	FAB45K684034XNLB
450	1.0	20.5	48.0	9.0	140.0	6.1	25.0	30.4	140	1.0	FAB45K105048XNLB
450	1.5	24.5	48.0	12.0	210.0	4.6	25.0	22.6	140	1.2	FAB45K155048XNLB
450	2.0	28.5	48.0	12.0	280.0	4.0	25.0	26	140	1.2	FAB45K205048XNLB
450	2.2	29.5	48.0	12.0	308.0	3.9	25.0	26.7	140	1.2	FAB45K225048XNLB
450	2.5	31.5	48.0	12.0	350.0	3.8	25.0	27.4	140	1.2	FAB45K255048XNLB
450	3.0	28.0	58.0	12.0	270.0	4.7	30.0	22.2	90	1.2	FAB45K305058XNLB
450	3.3	29.5	58.0	12.0	297.0	4.6	30.0	22.6	90	1.2	FAB45K335058XNLB
450	4.0	32.5	58.0	12.0	360.0	4.2	30.0	24.8	90	1.2	FAB45K405058XNLB

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Axial Lead, THB\* compliance) AC Applications

## FAH series

### Overview

The FAH series is constructed of metallized polypropylene film with polyester tape wrapping filled with resin and tinned copper wires.



### Applications

- AC output filter
- UPS systems
- Solar inverters
- Motor drives

### Features

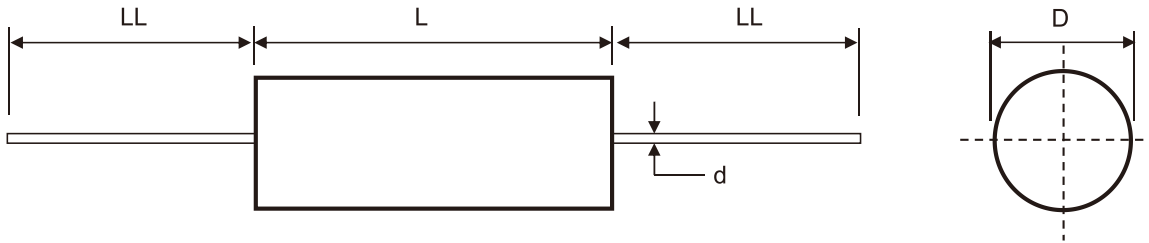
- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Able to withstand harsh environmental conditions

### Specifications

Items	Characteristics
Application	AC Filtering
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C(+85°C observing voltage must be de-rating at 1.5% per °C)
Rated Voltage	160Vac ~ 450Vac
Capacitance Range	0.15μF ~ 40μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤0.002 (0.20%) at 1 KHz. C≤20μF at +25°C ≤0.003 (0.30%) at 1 KHz. C>20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Polyester wrapping with epoxy resin fill
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ≤ ±5% DF change (Δtgδ):≤50 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.25 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ):≤40 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C ±2°C Relative humidity(RH) :85% ±2%
	Loading Voltage: Rated voltage (50Hz/60Hz)
	Test duration : 500 hours Capacitance change : ≤±10%

## FAH series

### ■ Outline Drawing



### ■ Dimensions - Lead wires

D	L	d	LL
(mm) max	(mm) max	(mm) $\pm 0.1$	(mm) min
11.0	22	0.8	35
9.5	28	0.8	35
10 ~ 13	34	0.8	35
13.5 ~ 20.5	34	1.0	35
18 ~ 22.5	44	1.0	35
23.5 ~ 33	44	1.2	35
15 ~ 27	48	1.0	35
28 ~ 35	58	1.2	35

# Metallized Polypropylene Film Capacitor (Axial Lead, THB\* compliance) AC Applications

## FAH series

### Technical data

Vac	Cap Value μF	Dimensions		Irms 10KHz 70°C A	Peak Current A	ESR 10K Typical mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		D mm max	L mm max								
160	1.0	10.0	34.0	6.0	60.0	8.7	12.0	47.9	30	0.8	FAH16K105034XNLB
160	2.2	11.5	34.0	6.0	66.0	14.2	20.0	29.3	30	0.8	FAH16K225034XNLB
160	2.5	12.0	34.0	7.0	75.0	12.7	20.0	24.1	30	0.8	FAH16K255034XNLB
160	3.0	13.5	34.0	8.0	90.0	10.7	20.0	21.9	30	1.0	FAH16K305034XNLB
160	3.3	14.0	34.0	9.0	99.0	9.8	20.0	18.9	30	1.0	FAH16K335034XNLB
160	4.0	15.5	34.0	9.0	120.0	8.3	20.0	22.3	30	1.0	FAH16K405034XNLB
160	5.0	17.0	34.0	9.0	150.0	7.0	20.0	26.5	30	1.0	FAH16K505034XNLB
160	6.8	19.5	34.0	9.0	204.0	5.7	20.0	32.5	30	1.0	FAH16K685034XNLB
160	8.0	18.0	48.0	9.0	160.0	6.9	25.0	26.8	20	1.0	FAH16K805048XNLB
160	10	20.0	48.0	9.0	200.0	12.4	25.0	14.9	20	1.0	FAH16K106048XNLB
160	15	24.0	48.0	12.0	300.0	5.1	25.0	20.4	20	1.2	FAH16K156048XNLB
160	18	26.0	48.0	12.0	360.0	4.4	25.0	23.7	20	1.2	FAH16K186048XNLB
160	20	28.0	48.0	12.0	400.0	10.7	25.0	9.7	20	1.2	FAH16K206048XNLB
160	25	31.0	48.0	12.0	500.0	4.0	25.0	26	20	1.2	FAH16K256048XNLB
160	30	29.0	58.0	12.0	450.0	5.2	30.0	20	15	1.2	FAH16K306058XNLB
160	35	33.5	58.0	12.0	525.0	4.6	30.0	22.6	15	1.2	FAH16K356058XNLB
160	40	36.0	58.0	12.0	600.0	8.8	30.0	11.8	15	1.2	FAH16K406058XNLB
250	0.47	9.5	34.0	6.0	28.2	14.4	15.0	28.9	45	0.8	FAH25K474034XNLB
250	0.68	10.0	34.0	6.0	30.6	15.2	20.0	27.4	45	0.8	FAH25K684034XNLB
250	0.82	11.0	34.0	6.5	36.9	13.8	20.0	26.5	45	0.8	FAH25K824034XNLB
250	1.0	12.0	34.0	7.0	45.0	10.8	20.0	28.3	45	0.8	FAH25K105034XNLB
250	1.5	14.5	34.0	9.0	67.5	75.0	20.0	24.7	45	1.0	FAH25K155034XNLB
250	2.0	16.5	34.0	9.0	90.0	6.1	20.0	30.4	45	1.0	FAH25K205034XNLB
250	2.2	17.5	34.0	9.0	99.0	5.7	20.0	32.5	45	1.0	FAH25K225034XNLB
250	2.5	18.5	34.0	9.0	112.5	5.2	20.0	35.6	45	1.0	FAH25K255034XNLB
250	3.0	20.0	34.0	9.0	135.0	4.7	20.0	39.4	45	1.0	FAH25K305034XNLB
250	3.3	18.0	48.0	9.0	99.0	6.8	25.0	27.2	30	1.0	FAH25K335048XNLB
250	4.0	19.5	48.0	9.0	120.0	6.0	25.0	30.9	30	1.0	FAH25K405048XNLB
250	4.7	21.0	48.0	9.0	141.0	5.3	25.0	34.9	30	1.0	FAH25K475048XNLB
250	5.0	21.5	48.0	9.0	150.0	5.2	25.0	35.6	30	1.0	FAH25K505048XNLB
250	6.8	25.0	48.0	12.0	204.0	4.2	25.0	24.8	30	1.2	FAH25K685048XNLB
250	10	30.0	48.0	12.0	300.0	3.5	25.0	29.8	30	1.2	FAH25K106048XNLB
250	15	31.5	58.0	12.0	300.0	6.2	30.0	16.8	20	1.2	FAH25K156058XNLB
250	20	35.0	58.0	12.0	400.0	5.2	30.0	20	20	1.2	FAH25K206058XNLB
330	0.47	11.0	34.0	6.0	28.2	17.0	20.0	24.5	60	0.8	FAH33K474034XNLB
330	0.68	13.0	34.0	7.0	40.8	12.2	20.0	25.1	60	0.8	FAH33K684034XNLB
330	1.0	15.5	34.0	9.0	60.0	8.6	20.0	21.5	60	1.0	FAH33K105034XNLB
330	2.0	18.5	48.0	9.0	80.0	8.2	25.0	22.6	40	1.0	FAH33K205048XNLB
330	2.2	19.5	48.0	9.0	88.0	6.8	25.0	27.2	40	1.0	FAH33K225048XNLB
330	3.0	22.5	48.0	9.0	120.0	6.2	25.0	29.9	40	1.0	FAH33K305048XNLB
330	3.3	23.5	48.0	12.0	132.0	5.6	25.0	18.6	40	1.2	FAH33K335048XNLB
330	4.0	25.5	48.0	12.0	160.0	4.9	25.0	21.3	40	1.2	FAH33K405048XNLB
330	4.7	27.5	48.0	12.0	188.0	4.6	25.0	22.6	40	1.2	FAH33K475048XNLB
330	5.0	28.5	48.0	12.0	200.0	4.4	25.0	23.7	40	1.2	FAH33K505048XNLB
330	6.8	28.5	58.0	12.0	204.0	8.8	30.0	11.8	30	1.2	FAH33K685058XNLB
330	10	34.5	58.0	12.0	300.0	6.9	30.0	15.1	30	1.2	FAH33K106058XNLB

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\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Axial Lead, THB\* compliance) AC Applications

## FAH series

### Technical data

Vac	Cap Value $\mu\text{F}$	Dimensions		Irms 10KHz 70°C A	Peak Current A	ESR 10K Typical m $\Omega$	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		D mm max	L mm max								
400	0.47	14.5	34.0	8.0	37.6	12.4	20.0	18.9	80	1.0	FAH40K474034XNLB
400	0.68	17.0	34.0	9.0	54.4	9.1	20.0	20.4	80	1.0	FAH40K684034XNLB
400	1.0	20.5	34.0	9.0	80.0	6.8	20.0	27.2	80	1.0	FAH40K105034XNLB
400	1.5	20.5	48.0	9.0	90.0	8.3	25.0	22.3	60	1.0	FAH40K155048XNLB
400	2.0	23.5	48.0	12.0	120.0	6.5	25.0	16	60	1.2	FAH40K205048XNLB
400	2.2	24.5	48.0	12.0	132.0	6.1	25.0	17.1	60	1.2	FAH40K225048XNLB
400	3.0	28.5	48.0	12.0	180.0	5.1	25.0	20.4	60	1.2	FAH40K305048XNLB
400	3.3	30.0	48.0	12.0	198.0	4.8	25.0	21.7	60	1.2	FAH40K335048XNLB
400	4.0	33.0	48.0	12.0	240.0	4.6	25.0	22.6	60	1.2	FAH40K405048XNLB
400	4.7	29.5	58.0	12.0	188.0	10.3	30.0	10.1	40	1.2	FAH40K475058XNLB
400	5.0	30.5	58.0	12.0	200.0	9.8	30.0	10.6	40	1.2	FAH40K505058XNLB
400	6.8	35.0	58.0	12.0	272.0	7.9	30.0	13.2	40	1.2	FAH40K685058XNLB
450	0.15	10.0	34.0	5.0	31.5	18.9	20.0	31.7	210	0.8	FAH45K154034XNLB
450	0.22	12.0	34.0	7.0	46.2	13.4	20.0	22.8	210	0.8	FAH45K224034XNLB
450	0.33	14.5	34.0	9.0	69.3	9.2	20.0	20.1	210	1.0	FAH45K334034XNLB
450	0.47	17.0	34.0	9.0	98.7	7.0	20.0	26.5	210	1.0	FAH45K474034XNLB
450	0.68	20.5	34.0	9.0	142.8	5.5	20.0	33.7	210	1.0	FAH45K684034XNLB
450	1.0	20.5	48.0	9.0	140.0	6.1	25.0	30.4	140	1.0	FAH45K105048XNLB
450	1.5	24.5	48.0	12.0	210.0	4.6	25.0	22.6	140	1.2	FAH45K155048XNLB
450	2.0	28.5	48.0	12.0	280.0	4.0	25.0	26	140	1.2	FAH45K205048XNLB
450	2.2	29.5	48.0	12.0	308.0	3.9	25.0	26.7	140	1.2	FAH45K225048XNLB
450	2.5	31.5	48.0	12.0	350.0	3.8	25.0	27.4	140	1.2	FAH45K255048XNLB
450	3.0	28.0	58.0	12.0	270.0	4.7	30.0	22.2	90	1.2	FAH45K305058XNLB
450	3.3	29.5	58.0	12.0	297.0	4.6	30.0	22.6	90	1.2	FAH45K335058XNLB
450	4.0	32.5	58.0	12.0	360.0	4.2	30.0	24.8	90	1.2	FAH45K405058XNLB

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# Metallized Polypropylene Film Capacitor (Aluminum Can, Single-Phase)

## FAC series

### Overview

The FAC series capacitors are designed for PFC systems and AC harmonic filtering, consist of metallized polypropylene film, enclosed in cylindrical Al case filled with soft resin, screw terminals or fast-on terminals.



### Applications

- PFC and AC filtering
- LCL systems
- UPS systems
- Solar inverter

### Features

- Self-healing property
- Overpressure disconnection device
- High capacitance density
- Metallized polypropylene film structure
- High reliability

### Specifications

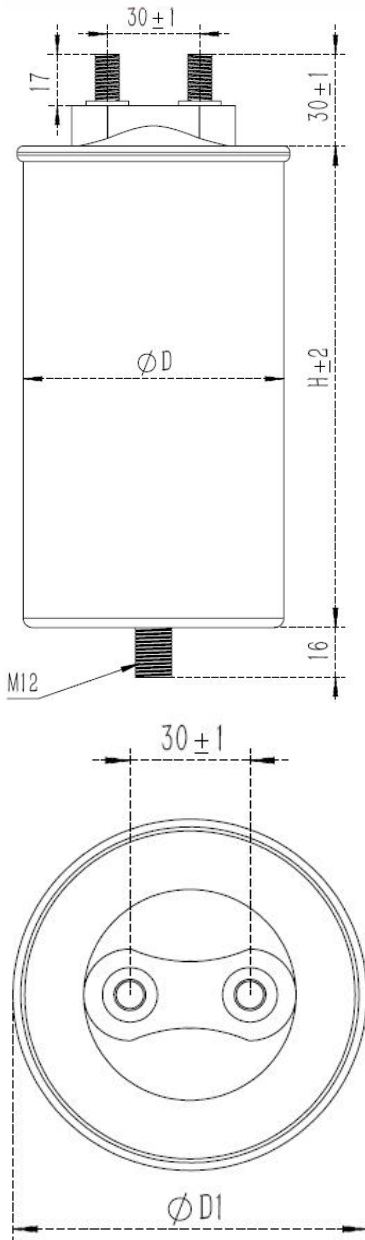
Items	Characteristics
Reference Standard	IEC 61071 UL810
Climatic Category	40/70/21 – IEC 60068-1
Operating Temperature	-40°C ~ +70°C
Rated AC Voltage	250Vac ~ 690Vac
Capacitance Range	10μF ~ 600μF
Capacitance Tolerance	±5%(J) or ±10%(K)
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 100Hz at +25°C
Internal Filling	Soft resin (Non PCB)
Test Voltage Between Terminals	2.15 x Vn for 10s (terminal to terminal)
Test Voltage Between Terminals to Case	4.0kVac 50 Hz for 60s at +25°C
Insulation Resistance (IR*Cn)	IR x C ≥ 5000 s at 100VDC 1 minute at +25°C
Surge current (Is)	200 * I rated
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature ≤ +70°C ΔC/C ≤ ±3%
Max Hot-spot Temperature	≤ +85°C
Storage Temperature	-40°C ~ +85°C
Over voltage	1.1Un up to 8h / day 1.15Un up to 30 min / day 1.2Un 5 min 1.3Un 1 min
Degree of Protection	IP 00
Max permissible altitude	2000 m above sea level
Mounting	Vertical or horizontal
Installation torque max	M6: 4Nm M8 : 6Nm The bottom stud of case M12: 15Nm
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Permissible Humidity	Annual average ≤95% on 30days/ year. Dewing not admissible
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH . RH ≤ 85% for 30 days randomly distributed throughout the year
Endurance Test	Test conditions & performance: Temperature: +70°C ±2°C Voltage applied: 1.25 X VR (a.c.) Test duration : 1000 hours Capacitance change : ≤ ±3% DF change (Δtgδ): ≤ 20 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥ 50% of initial limit

# Metallized Polypropylene Film Capacitor (Aluminum Can, Single-Phase)

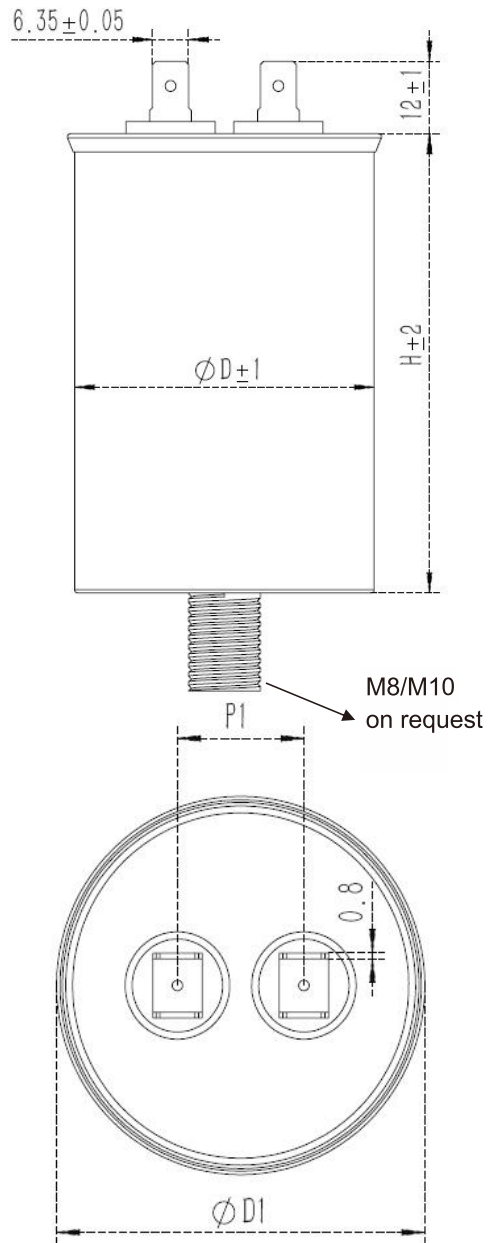
## FAC series

### Terminal Configuration

$D \geq 76$  Screw terminals



$D \leq 63.5$  Fast-on terminals



Notes:

Diameter D	$\leq 76\text{mm}$	86mm	96mm	116mm	136mm
Diameter After Sealed D1	D + 3mm	D + 4mm	D + 4mm	D + 5mm	D + 6mm

# Metallized Polypropylene Film Capacitor (Aluminum Can, Single-Phase)

## FAC series

### Technical data

Vac	Cap Value μF	OD±1		H±2		Irms max at 50°C A	Peak Current A	ESR 1KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Pkg Qty pcs	Part Number
		mm	inch	mm	inch								
250	60	50.0	(1.97)	100.0	(3.94)	16.0	1002	3.9	175	7.8	16.7	15	FAC25K606U10QVEC
250	80	50.0	(1.97)	100.0	(3.94)	16.0	1336	4.4	175	7.8	16.7	15	FAC25K806U10QVEC
250	100	50.0	(1.97)	125.0	(4.92)	16.0	1260	4.8	175	6.3	12.6	15	FAC25K107U12QVEC
250	120	55.0	(2.17)	125.0	(4.92)	16.0	1512	4.6	175	6.0	12.6	15	FAC25K127V12QVEC
250	150	60.0	(2.36)	125.0	(4.92)	16.0	1890	4.3	175	5.3	12.6	12	FAC25K157W12QVEC
250	150	76.0	(2.99)	125.0	(4.92)	22.0	1620	3.3	190	4.7	10.8	12	FAC25K157312MH8D
250	200	76.0	(2.99)	125.0	(4.92)	30.0	2340	3.0	200	4.7	11.7	12	FAC25K207312MH8D
250	250	76.0	(2.99)	150.0	(5.91)	30.0	2150	3.4	190	4.3	8.6	12	FAC25K257315MH8D
250	300	86.0	(3.39)	150.0	(5.91)	36.0	2580	3.2	190	4.3	8.6	8	FAC25K307515MH8D
250	350	76.0	(2.99)	200.0	(7.87)	35.0	3640	3.1	200	4.0	10.4	12	FAC25K307320MH8D
250	400	86.0	(3.39)	200.0	(7.87)	40.0	4160	3.0	200	4.0	10.4	8	FAC25K407520MH8D
250	500	86.0	(3.39)	200.0	(7.87)	50.0	5400	3.3	220	2.9	10.8	8	FAC25K507520MH8D
250	600	86.0	(3.39)	250.0	(9.84)	50.0	4800	3.1	200	2.5	8.0	8	FAC25K607525MH8D
330	50	50.0	(1.97)	100.0	(3.94)	16.0	835	5.1	175	7.8	16.7	15	FAC33K506U10QVEC
330	60	50.0	(1.97)	125.0	(4.92)	16.0	756	5.4	175	6.3	12.6	15	FAC33K606U12QVEC
330	100	60.0	(2.36)	125.0	(4.92)	16.0	1260	4.1	175	5.3	12.6	12	FAC33K107W12QVEC
330	100	76.0	(2.99)	125.0	(4.92)	30.0	1310	3.8	190	5.2	13.1	12	FAC33K107312MH8D
330	120	63.5	(2.50)	125.0	(4.92)	16.0	864	3.8	175	5.5	7.2	12	FAC33K127112QVEC
330	150	76.0	(2.99)	150.0	(5.91)	40.0	1350	3.0	190	4.3	9.0	12	FAC33K157315MH8D
330	200	86.0	(3.39)	150.0	(5.91)	40.0	2620	3.1	200	4.0	13.1	8	FAC33K207515MH8D
330	250	76.0	(2.99)	200.0	(7.87)	40.0	2150	3.9	190	4.0	8.6	12	FAC33K257320MH8D
330	300	86.0	(3.39)	200.0	(7.87)	50.0	3930	3.6	200	2.9	13.1	8	FAC33K307520MH8D
330	350	86.0	(3.39)	200.0	(7.87)	50.0	4585	3.4	200	2.9	13.1	8	FAC33K357520MH8D
330	400	86.0	(3.39)	250.0	(9.84)	50.0	3240	3.6	200	2.5	8.1	8	FAC33K407525MH8D
450	20	50.0	(1.97)	75.0	(2.95)	16.0	700	5.2	175	10.5	35.0	15	FAC45K206U75QVEC
450	30	50.0	(1.97)	100.0	(3.94)	16.0	699	6.9	175	7.8	23.3	15	FAC45K306U10QVEC
450	40	50.0	(1.97)	100.0	(3.94)	16.0	540	5.7	175	7.8	13.5	15	FAC45K406U10QVEC
450	50	50.0	(1.97)	125.0	(4.92)	16.0	540	5.0	175	5.3	10.8	15	FAC45K506U12QVEC
450	50	76.0	(2.99)	100.0	(3.94)	20.0	855	3.3	190	5.3	17.1	12	FAC45K506310MH8D
450	70	60.0	(2.36)	125.0	(4.92)	16.0	910	4.8	175	5.5	13.0	12	FAC45K706W12QVEC
450	80	60.0	(2.36)	125.0	(4.92)	16.0	904	4.4	175	5.5	11.3	12	FAC45K806W12QVEC
450	100	76.0	(2.99)	150.0	(5.91)	35.0	1080	4.7	190	4.3	10.8	12	FAC45K107315MH8D
450	150	86.0	(3.39)	150.0	(5.91)	40.0	1965	3.9	200	4.3	13.1	8	FAC45K157515MH8D
450	200	86.0	(3.39)	200.0	(7.87)	40.0	2700	3.7	220	2.9	13.5	8	FAC45K207520MH8D
450	250	86.0	(3.39)	200.0	(7.87)	50.0	2025	3.8	200	2.9	8.1	8	FAC45K257520MH8D
450	300	86.0	(3.39)	250.0	(9.84)	50.0	2400	4.1	220	2.5	8.0	8	FAC45K307525MH8D
480	20	50.0	(1.97)	75.0	(2.95)	16.0	750	4.8	175	10.5	37.5	15	FAC48K206U75QVEC
480	25	50.0	(1.97)	100.0	(3.94)	16.0	750	4.2	175	7.8	30.0	15	FAC48K256U10QVEC
480	30	50.0	(1.97)	100.0	(3.94)	16.0	750	3.9	175	7.8	25.0	15	FAC48K306U10QVEC
480	40	60.0	(2.36)	100.0	(3.94)	12.0	852	5.2	175	7.3	21.3	12	FAC48K406W10QVEC
480	50	55.0	(2.17)	125.0	(4.92)	14.0	850	4.6	175	6.0	17.0	15	FAC48K506V12QVEC
480	60	76.0	(2.99)	125.0	(4.92)	18.0	1056	3.7	190	4.7	17.6	12	FAC48K606312MH8D
480	70	76.0	(2.99)	125.0	(4.92)	20.0	1050	3.4	190	4.7	15.0	12	FAC48K706312MH8D
480	80	76.0	(2.99)	150.0	(5.91)	30.0	1224	4.2	190	4.3	15.3	12	FAC48K806315MH8D
480	100	76.0	(2.99)	200.0	(7.87)	50.0	1710	4.1	190	4.0	17.1	12	FAC48K107320MH8D
480	150	76.0	(2.99)	200.0	(7.87)	40.0	2565	3.5	200	4.0	17.1	12	FAC48K157320MH8D
480	200	76.0	(2.99)	250.0	(9.84)	40.0	2620	4.6	200	3.0	13.1	12	FAC48K207325MH8D
480	250	86.0	(3.39)	250.0	(9.84)	50.0	2925	4.2	200	2.5	11.7	8	FAC48K257525MH8D
550	20	50.0	(1.97)	100.0	(3.94)	16.0	600	6.9	175	7.9	30.0	15	FAC55K206U10QVEC
550	30	50.0	(1.97)	125.0	(4.92)	16.0	750	6.6	175	6.3	25.0	15	FAC55K306U12QVEC
550	40	60.0	(2.36)	125.0	(4.92)	16.0	752	7.1	175	5.5	18.8	15	FAC55K406W12QVEC
550	50	63.5	(2.50)	125.0	(4.92)	16.0	850	6.1	175	5.3	17.0	12	FAC55K506112QVEC

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.



# Metallized Polypropylene Film Capacitor (Aluminum Can, Single-Phase)

## FAC series

### Technical data

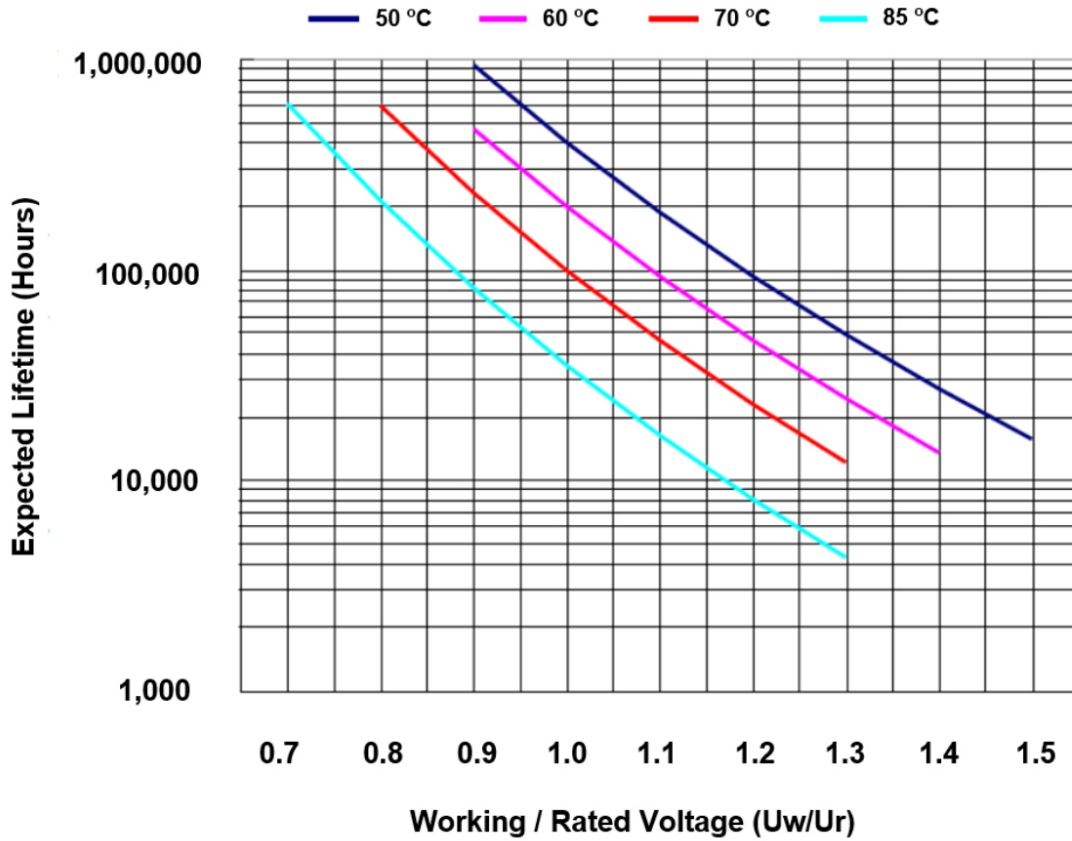
Vac	Cap Value μF	OD±1		H±2		Irms max at 50°C A	Peak Current A	ESR 1KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Pkg Qty pcs	Part Number
		mm	inch	mm	inch								
550	70	76.0	(2.99)	150.0	(5.91)	25.0	903	4.6	175	4.2	12.9	12	FAC55K706315MH8D
550	80	76.0	(2.99)	150.0	(5.91)	25.0	1800	4.3	190	4.3	22.5	12	FAC55K806315MH8D
550	100	86.0	(3.39)	150.0	(5.91)	30.0	2820	3.9	200	4.0	28.2	8	FAC55K107515MH8D
550	125	86.0	(3.39)	200.0	(7.87)	30.0	2825	3.6	200	2.9	22.6	8	FAC55K127520MH8D
550	150	86.0	(3.39)	200.0	(7.87)	40.0	3210	5.0	200	2.9	21.4	8	FAC55K157520MH8D
550	200	86.0	(3.39)	250.0	(9.84)	50.0	3220	4.4	200	2.5	16.1	8	FAC55K207525MH8D
550	250	96.0	(3.78)	250.0	(9.84)	50.0	3500	4.0	240	2.1	14.0	6	FAC55K257625MH8D
550	300	106.0	(4.17)	250.0	(9.84)	50.0	3510	3.7	240	2.0	11.7	5	FAC55K307725MH8D
600	10	50.0	(1.97)	75.0	(2.95)	16.0	350	6.4	160	10.5	35.0	15	FAC60K106U75QVEC
600	20	50.0	(1.97)	125.0	(4.92)	16.0	500	11.1	160	6.3	25.0	15	FAC60K206U12QVEC
600	25	50.0	(1.97)	125.0	(4.92)	16.0	600	6.1	175	6.3	24.0	15	FAC60K256U12QVEC
600	30	60.0	(2.36)	125.0	(4.92)	16.0	600	5.4	175	5.3	20.0	12	FAC60K306W12QVEC
600	35	60.0	(2.36)	125.0	(4.92)	16.0	700	7.3	175	5.3	20.0	12	FAC60K356W12QVEC
600	40	63.5	(2.50)	125.0	(4.92)	16.0	700	6.6	175	5.3	17.5	12	FAC60K406112QVEC
600	45	65.0	(2.56)	125.0	(4.92)	16.0	702	6.1	175	5.3	15.6	12	FAC60K456212QVEC
600	50	76.0	(2.99)	150.0	(5.91)	20.0	850	5.7	175	4.3	17.0	12	FAC60K506315MH8D
660	10	50.0	(1.97)	125.0	(4.92)	16.0	550	5.2	160	10.5	55.0	15	FAC66K106U12QVEC
660	15	60.0	(2.36)	125.0	(4.92)	16.0	420	6.2	160	6.3	28.0	12	FAC66K156W12QVEC
660	20	55.0	(2.17)	125.0	(4.92)	16.0	550	8.3	175	6.3	27.5	12	FAC66K206V12QVEC
660	25	60.0	(2.36)	125.0	(4.92)	16.0	550	7.9	175	5.3	22.0	12	FAC66K256W12QVEC
660	30	63.5	(2.50)	125.0	(4.92)	16.0	750	6.3	175	5.5	25.0	12	FAC66K306112QVEC
660	40	76.0	(2.99)	150.0	(5.91)	30.0	900	5.2	175	4.6	22.5	12	FAC66K406315MH8D
660	50	86.0	(3.39)	150.0	(5.91)	40.0	1000	4.7	175	4.0	20.0	8	FAC66K506515MH8D
690	10	50.0	(1.97)	125.0	(4.92)	16.0	550	5.2	160	6.3	55.0	15	FAC69K106U12QVEC
690	15	50.0	(1.97)	125.0	(4.92)	16.0	420	6.2	160	6.3	28.0	15	FAC69K156U12QVEC
690	20	55.0	(2.17)	125.0	(4.92)	16.0	550	8.3	175	6.0	27.5	15	FAC69K206V12QVEC
690	30	63.5	(2.50)	125.0	(4.92)	16.0	750	6.3	175	5.5	25.0	12	FAC69K306112QVEC
690	40	76.0	(2.99)	150.0	(5.91)	25.0	1152	4.8	190	4.3	28.8	12	FAC69K406315MH8D
690	50	86.0	(3.39)	150.0	(5.91)	30.0	1150	4.3	190	4.0	23.0	8	FAC69K506515MH8D
690	70	76.0	(2.99)	250.0	(9.84)	30.0	1260	3.7	200	2.9	18.0	12	FAC69K706325MH8D
690	85	86.0	(3.39)	250.0	(9.84)	40.0	1530	3.5	220	2.5	18.0	8	FAC69K856525MH8D
690	100	86.0	(3.39)	250.0	(9.84)	40.0	1800	3.3	200	2.5	18.0	8	FAC69K107525MH8D
690	125	106.0	(4.17)	250.0	(9.84)	50.0	1563	4.0	220	2.0	12.5	6	FAC69K127725MH8D
690	150	106.0	(4.17)	250.0	(9.84)	50.0	1875	3.8	240	2.0	12.5	6	FAC69K157725MH8D
690	170	106.0	(4.17)	250.0	(9.84)	50.0	2125	3.6	240	2.0	12.5	6	FAC69K177725MH8D

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## FAC series

Expected lifetime curves



### Cautions and Warnings

- In case of dents of more than 1 mm depth or any other mechanical damage, capacitor must not be used at all.
- To ensure full functionality of capacitor, a minimum space of 12 mm has to be kept above each capacitor.
- Do not handle the capacitor before it is discharged.
- Check tightness of the connection/terminals periodically.
- The threaded bottom of the capacitor has to be used for grounding. The maximum tightening torque is 15Nm.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments. Regular maintenance and cleaning especially of the terminals is required to avoid conductive path between phase or phase and ground.

# Metallized Polypropylene Film Capacitor (Aluminum Can, Three-Phase)

## FAD series



### Overview

The FAD series capacitors are designed for PFC systems and AC harmonic filtering at the AC output of large inverter system, consist of metallized polypropylene film, enclosed in cylindrical Al case filled with soft resin.

### Applications

- PFC and AC filtering
- LCL system
- Three-phase, delta connected
- Solar inverter and wind power

### Features

- Self-healing property
- Overpressure disconnection device
- PFC controllers
- Metallized polypropylene film structure

### Specifications

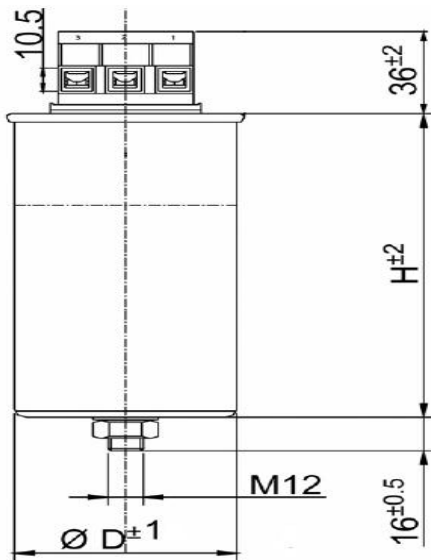
Items	Characteristics
Reference Standard	IEC 60831 / IEC 61071 , UL 810
Climatic Category	40/70/21 - IEC 60068-1
Operating Temperature	-40°C ~ +55°C (IEC 60831) -40°C ~ +70°C (IEC 61071)
Rated AC Voltage	230Vac ~ 690Vac
Capacitance Range	3 x 40μF ~ 3 x 335μF
Capacitance Tolerance	±5% or ±10%
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 100Hz
Internal filling	Soft resin (Non PCB)
Test Voltage Between Terminals	2.15 *Urms/10s
Test Voltage Between Terminals to Case	4.0KVac / 50 Hz/10s
Insulation Resistance (IR*Cn)	Ris x C≥5,000 s (20°C, 100Vdc/ 1 min)
Life Expectancy	100,000 hours at 1.0Urms @ Hot-Spot temperature ≤70°C ΔC/C ≤ ±3%
Max Hot-spot Temperature	≤85°C
Surge current Is	200 * I rated
Storage Temperature	-40°C ~ +85°C
Over Voltage	1.1Un up to 8h / day 1.15Un up to 30 min / day 1.2Un 5 min / day 1.3Un 1 min / day
Degree of Protection	IP 20
Max permissible altitude	2000 m above sea level
Mounting	Vertical or horizontal
Installation torque	Max 3Nm for terminal block with M5 screw-clamps. The bottom stud of case M12: 15Nm max
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Permissible Humidity	Annual average ≤95% on 30days/ year. Dewing not admissible
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Endurance Test	Test conditions & performance:
	Temperature: +70°C ±2°C Voltage applied: 1.25 X VR (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±3% DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Aluminum Can, Three-Phase)

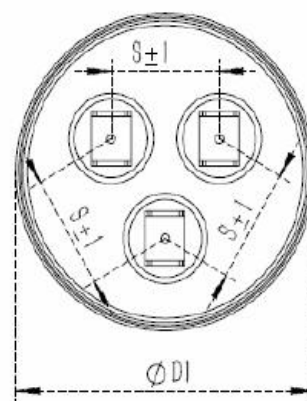
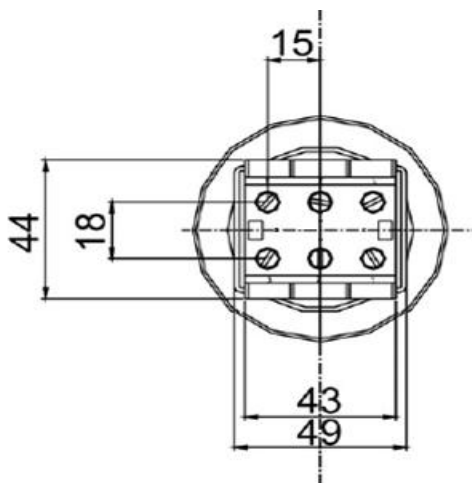
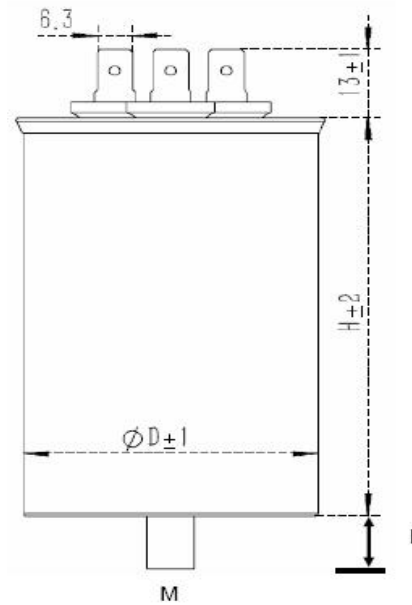
## FAD series

### Terminal Configuration

Screw terminals



Fast-on terminals



# Metallized Polypropylene Film Capacitor (Aluminum Can, Three-Phase)

## FAD series

### Technical data

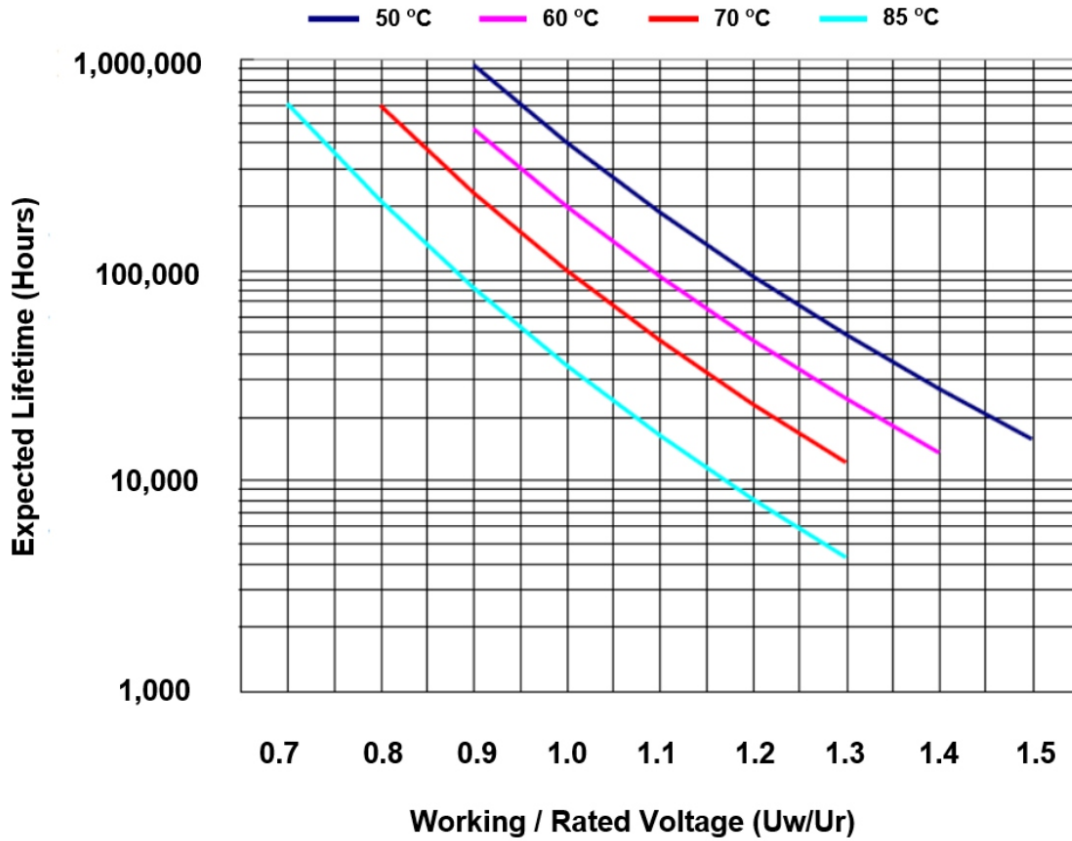
Vac	Cap Value μF	OD±1		H ±2		Output Kvar @50Hz	Irms at 40°C A	Surge Current A	dv/dt V/us	Pkg Qty pcs	Part Number
		mm	inch	mm	inch						
230	3 x 200.6	86	(3.39)	275	(10.83)	10.0	25.1	5021	25	8	FAD23K207527DE5D
230	3 x 200.6	116	(4.57)	160	(6.30)	10.0	25.1	5021	25	5	FAD23K207916DE5D
230	3 x 250.7	86	(3.39)	275	(10.83)	12.5	31.4	6276	25	8	FAD23K257527DE5D
230	3 x 250.7	116	(4.57)	200	(7.87)	12.5	31.4	6276	25	5	FAD23K257920DE5D
230	3 x 300.9	86	(3.39)	350	(13.78)	15.0	37.7	7531	25	8	FAD23K307535DE5D
230	3 x 300.9	116	(4.57)	200	(7.87)	15.0	37.7	7531	25	5	FAD23K307920DE5D
230	3 x 335.0	116	(4.57)	230	(9.06)	16.7	41.9	8384	25	5	FAD23K337923DE5D
400	3 x 66.3	86	(3.39)	200	(7.87)	10.0	14.4	2887	44	8	FAD40K666520DE5D
400	3 x 82.9	86	(3.39)	200	(7.87)	12.5	18.0	3609	44	8	FAD40K836520DE5D
400	3 x 99.5	86	(3.39)	275	(10.83)	15.0	21.7	4330	44	8	FAD40K107527DE5D
400	3x110.7	86	(3.39)	275	(10.83)	16.7	24.1	4821	44	8	FAD40K117527DE5D
400	3x110.7	116	(4.57)	160	(6.30)	16.7	24.1	4821	44	5	FAD40K117916DE5D
400	3x132.6	86	(3.39)	275	(10.83)	20.0	28.9	5774	44	8	FAD40K137527DE5D
400	3x132.6	116	(4.57)	200	(7.87)	20.0	28.9	5774	44	5	FAD40K137920DE5D
400	3x165.8	86	(3.39)	350	(13.78)	25.0	36.1	7217	44	8	FAD40K167535DE5D
400	3x165.8	116	(4.57)	200	(7.87)	25.0	36.1	7217	44	5	FAD40K167920DE5D
400	3x198.9	136	(5.35)	200	(7.87)	30.0	43.3	8661	44	2	FAD40K207020DE5D
440	3x46	86	(3.39)	160	(6.30)	8.3	10.9	2178	48	8	FAD44K466516DE5D
440	3 x 68.5	86	(3.39)	200	(7.87)	12.5	16.4	3280	48	8	FAD44K696520DE5D
440	3 x 82.2	86	(3.39)	200	(7.87)	15.0	19.7	3937	48	8	FAD44K836520DE5D
440	3x109.0	86	(3.39)	275	(10.83)	20.0	26.2	5249	48	8	FAD44K117527DE5D
440	3x109.0	116	(4.57)	160	(6.30)	20.0	26.2	5249	48	5	FAD44K117916DE5D
440	3x123.3	86	(3.39)	275	(10.83)	22.5	29.5	5905	48	8	FAD44K127527DE5D
440	3x123.3	116	(4.57)	200	(7.87)	22.5	29.5	5905	48	5	FAD44K127920DE5D
440	3x137.0	116	(4.57)	200	(7.87)	25.0	32.8	6561	48	5	FAD44K147920DE5D
440	3x156	116	(4.57)	200	(7.87)	28.1	36.9	7375	48	5	FAD44K157920DE5D
440	3x164.4	86	(3.39)	350	(13.78)	30.0	39.4	7873	48	8	FAD44K167535DE5D
440	3x164.4	116	(4.57)	200	(7.87)	30.0	39.4	7873	48	5	FAD44K167920DE5D
480	3x40	86	(3.39)	200	(7.87)	8.7	10.5	2093	52	8	FAD48K406520DE5D
480	3x60	86	(3.39)	275	(10.83)	13.0	15.6	3127	52	8	FAD48K606527DE5D
480	3x80	116	(4.57)	200	(7.87)	17.4	20.9	4186	52	5	FAD48K806920DE5D
480	3x120	116	(4.57)	275	(10.83)	26.0	31.3	6255	52	5	FAD48K127927DE5D
525	3 x 38.5	86	(3.39)	200	(7.87)	10.0	11.0	2199	57	8	FAD52K396520DE5D
525	3x48.1	86	(3.39)	200	(7.87)	12.5	13.7	2749	57	8	FAD52K486520DE5D
525	3x58	86	(3.39)	230	(9.06)	15.0	16.5	3299	57	8	FAD52K586523DE5D
525	3 x 77.0	86	(3.39)	275	(10.83)	20.0	22.0	4399	57	8	FAD52K776527DE5D
525	3*96	86	(3.39)	350	(13.78)	25.0	27.5	5499	57	8	FAD52K966535DE5D
525	3*96	116	(4.57)	200	(7.87)	25.0	27.5	5499	57	5	FAD52K966920DE5D
525	3*115.4	136	(5.35)	200	(7.87)	30.0	33.0	6598	57	2	FAD52K117020DE5D
660	3 x 20.3	86	(3.39)	200	(7.87)	8.3	7.3	1457	72	8	FAD66K206520DE5D
660	3 x 24.4	86	(3.39)	200	(7.87)	10.0	8.7	1750	72	8	FAD66K256520DE5D
660	3 x 30.4	86	(3.39)	230	(9.06)	12.5	10.9	2187	72	8	FAD66K306523DE5D
660	3 x 36.5	96	(3.78)	230	(9.06)	15.0	13.1	2624	72	6	FAD66K366623DE5D
660	3 x 48.7	86	(3.39)	350	(13.78)	20.0	17.5	3499	72	8	FAD66K496535DE5D
690	3 x 27.9	86	(3.39)	230	(9.06)	12.5	10.5	2092	75	8	FAD69K286523DE5D
690	3 x 33.4	96	(3.78)	230	(9.06)	15.0	12.6	2510	75	6	FAD69K336623DE5D
690	3 x 44.6	86	(3.39)	350	(13.78)	20.0	16.7	3347	75	8	FAD69K456535DE5D
690	3 x 55.7	86	(3.39)	350	(13.78)	25.0	20.9	4184	75	8	FAD69K566535DE5D
850	3X8	76	(2.99)	164	6.46	5.4	20.0	960	120	12	FAD85K805316DE5D
850	3X16	86	(3.39)	200	7.87	10.9	25.0	1920	120	8	FAD85K166520DE5D
850	3X25	96	(3.78)	230	9.06	17.0	40.0	2500	100	6	FAD85K256623DE5D
850	3X37.5	116	(4.57)	230	9.06	25.5	45.0	3800	100	5	FAD85K376923DE5D
850	3X41.5	116	(4.57)	230	9.06	28.2	50.0	4200	100	5	FAD85K416923DE5D
850	3X49	136	(5.35)	230	9.06	33.3	50.0	4900	100	2	FAD85K496023DE5D
850	3X55.7	136	(5.35)	230	9.06	37.9	50.0	5600	100	2	FAD85K556023DE5D

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## FAD series

### Expected lifetime curves



### Cautions and Warnings

- In case of dents of more than 1 mm depth or any other mechanical damage, capacitor must not be used at all.
- To ensure full functionality of capacitor, a minimum space of 12 mm has to be kept above each capacitor.
- Do not handle the capacitor before it is discharged.
- Check tightness of the connection/terminals periodically.
- The threaded bottom of the capacitor has to be used for grounding. The maximum tightening torque is 15Nm.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments. Regular maintenance and cleaning especially of the terminals is required to avoid conductive path between phase or phase and ground.

# Metallized Polypropylene Film AC Motor Capacitor (Aluminum Can)

## F AE series



### Overview

The FAE series capacitors are designed for motor run application, consist of metallized polypropylene film, enclosed in cylindrical Al case filled with castor oil, fast-on terminals.

### Applications

- AC motor for starting or running

### Features

- Self-healing property
- Overpressure disconnection device
- low dissipation factor
- Metallized polypropylene film structure
- Fast-on terminals 6.3\*0.8mm
- 10K AFC protected

### Specifications

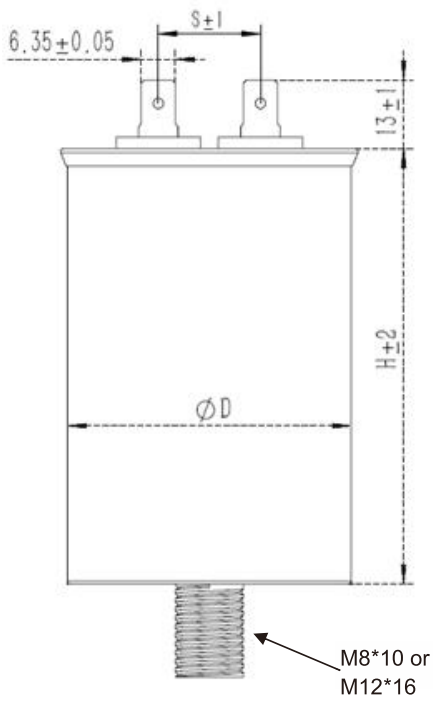
Items	Characteristics
Reference Standard	IEC 60252 UL 810
Climatic Category	40/85/21 – IEC 60068-1
Operating Temperature	-40°C ~ +85°C
Rated AC Voltage	450Vac 50/60Hz
Capacitance Range	2.0µF ~ 100µF
Capacitance Tolerance	±5%(J) or ±10%(K)
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 100Hz at +25°C
Test Voltage Between Terminals	2.15 x V <sub>n</sub> for 10s (terminal to terminal)
Test Voltage Between Terminals to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance (IR*C <sub>n</sub> )	IR x C ≥ 3000s
Life Expectancy	10,000 hours at 1.0 Urms
Max Hot-spot Temperature	≤ +85°C
Storage Temperature	-40°C ~ +85°C
Over Voltage	1.1U <sub>n</sub> up to 8h / day 1.15U <sub>n</sub> up to 30 min / day 1.2U <sub>n</sub> 5 min / day 1.3U <sub>n</sub> 1 min / day
Degree of Protection	IP 00
Max permissible altitude	2000 m above sea level
Mounting	Vertical or horizontal
Installation torque max	The bottom stud of case M12: 15Nm The bottom stud of case M8: 10Nm
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Permissible Humidity	Annual average ≤95% on 30days/ year. Dewing not admissible
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75% RH ≤ 85% for 30 days randomly distributed throughout the year
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied: 1.35 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±3% DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film AC Motor Capacitor (Aluminum Can)

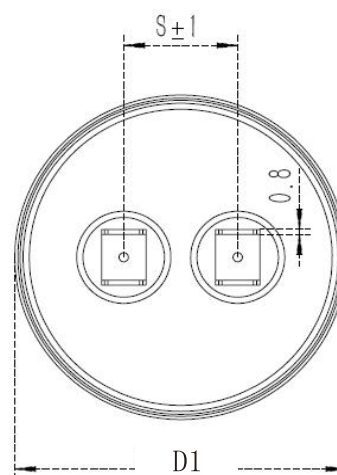
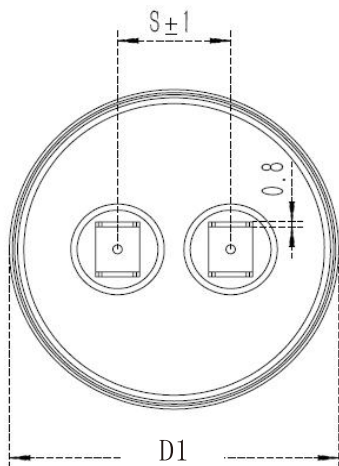
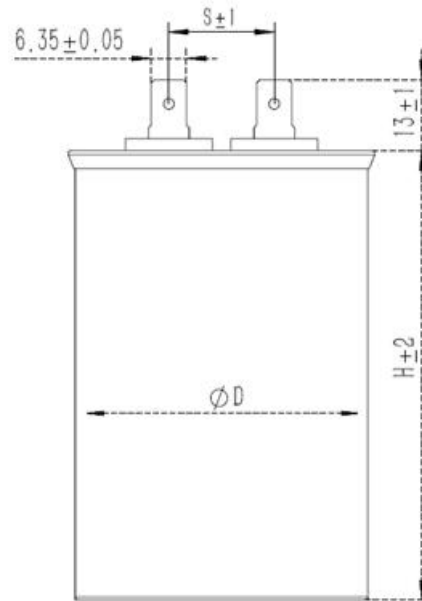
## FAE series

### Terminal Configuration

Fast-on terminals with bottom stud



Fast-on terminals without stud



Notes:

Diameter D	40mm	45mm	50mm	55mm	60mm	63.5mm
Pitch S	16mm	18mm	20mm	20mm	20mm	20mm



## Metallized Polypropylene Film AC Motor Capacitor (Aluminum Can)

### FAE series

#### ■ Technical data

Vac	Cap Value μF	D±1	D1 ±1	H ±2	S±1	Part Number
		mm	mm	mm	mm	
450	2.0	40.0	43.0	55.0	16.0	FAE45K205T55QTEC
450	3.0	40.0	43.0	55.0	16.0	FAE45K305T55QTEC
450	4.0	40.0	43.0	55.0	16.0	FAE45K405T55QTEC
450	5.0	40.0	43.0	55.0	16.0	FAE45K505T55QTEC
450	7.5	40.0	43.0	65.0	16.0	FAE45K755T65QTEC
450	10	40.0	43.0	65.0	16.0	FAE45K106T65QTEC
450	13	40.0	43.0	75.0	16.0	FAE45K136T75QTEC
450	15	40.0	43.0	75.0	16.0	FAE45K156T75QTEC
450	18	40.0	43.0	75.0	16.0	FAE45K186T75QTEC
450	20	50.0	53.0	65.0	20.0	FAE45K206U65QVEC
450	25	50.0	53.0	75.0	20.0	FAE45K256U75QVEC
450	30	50.0	53.0	85.0	20.0	FAE45K306U85QVEC
450	35	50.0	53.0	85.0	20.0	FAE45K356U85QVEC
450	40	50.0	53.0	100.0	20.0	FAE45K406U10QVEC
450	45	50.0	53.0	110.0	20.0	FAE45K456U11QVEC
450	50	50.0	53.0	110.0	20.0	FAE45K506U11QVEC
450	55	50.0	53.0	125.0	20.0	FAE45K556U12QVEC
450	60	50.0	53.0	125.0	20.0	FAE45K606U12QVEC
450	65	55.0	58.0	110.0	20.0	FAE45K656V11QVEC
450	70	55.0	58.0	125.0	20.0	FAE45K706V12QVEC
450	80	60.0	63.0	125.0	20.0	FAE45K806W12QVEC
450	100	63.5	66.5	125.0	20.0	FAE45K107112QVEC

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film AC Motor Capacitor (Aluminum Can & Dual Type)

## FAF series



### Overview

The FAF series capacitors are designed for motor run application, consist of metallized polypropylene film, enclosed in cylindrical Al case filled with castor oil, fast-on terminals.

### Applications

- AC motor for starting or running

### Features

- Self-healing property
- Overpressure disconnection device
- low dissipation factor
- Metallized polypropylene film structure
- Fast-on terminals 6.3\*0.8mm
- 10K AFC protected, 2 caps in one Al case

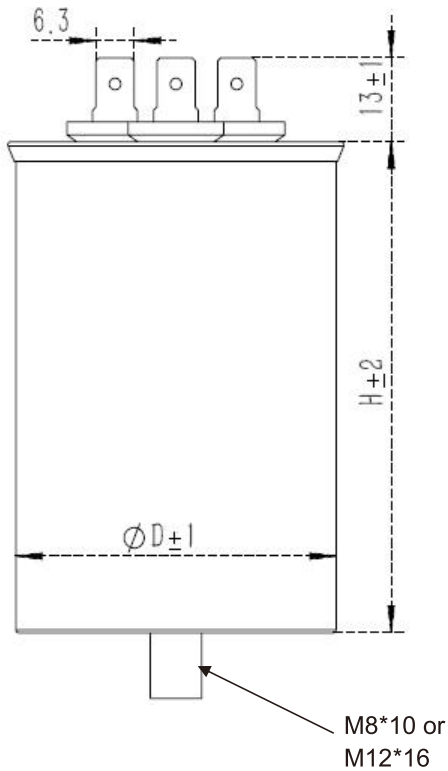
### Specifications

Items	Characteristics
Reference Standard	IEC 60252 UL 810
Climatic Category	40/85/21 – IEC 60068-1
Operating Temperature	-40°C ~ +85°C
Rated AC Voltage	450Vac 50/60Hz
Capacitance Range	15+1.5μF ~ 80+15μF
Capacitance Tolerance	±5%(J) or ±10%(K)
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 100Hz at +25°C
Test Voltage Between Terminals	2.15 x Vn for 10s
Test Voltage Between Terminals to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance (IR*Cn)	IR x C≥3000 s
Life Expectancy	10,000 hours at 1.0 Urms
Max Hot-spot Temperature	≤ +85°C
Storage Temperature	-40°C ~ +85°C
Over Voltage	1.1Un up to 8h / day 1.15Un up to 30 min / day 1.2Un 5 min / day 1.3Un 1 min / day
Degree of Protection	IP 00
Max permissible altitude	2000 m above sea level
Mounting	Vertical or horizontal
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Permissible Humidity	Annual average ≤95% on 30days/ year. Dewing not admissible
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH . RH ≤ 85% for 30 days randomly distributed throughout the year
Endurance Test	Test conditions & performance: Temperature: +85°C ±2°C Voltage applied: 1.35 X V <sub>R</sub> (a.c.) Test duration : 1000 hours Capacitance change : ≤±3% DF change (Δtgδ): ≤20 X 10 <sup>-4</sup> at 100Hz Insulation resistance: ≥50% of initial limit

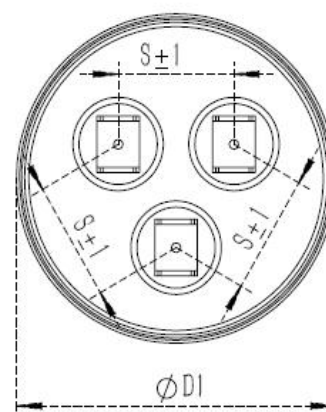
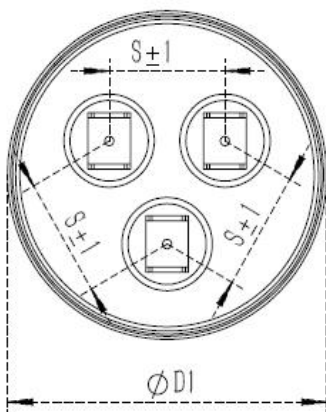
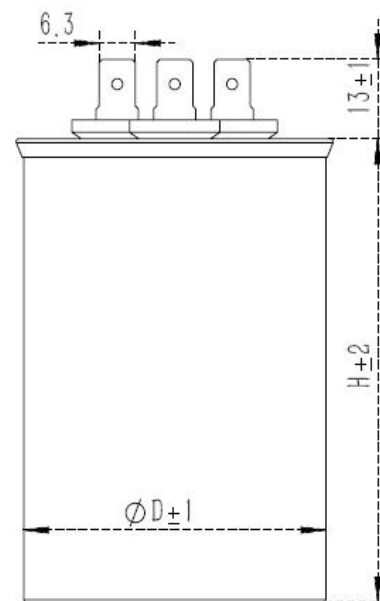
## FAF series

### ■ Terminal Configuration

Fast-on terminals with stud



Fast-on terminals without stud



## Metallized Polypropylene Film AC Motor Capacitor (Aluminum Can & Dual Type)

### FAF series

#### ■ Technical data

Vac	Cap Value μF	D±1	D1 ±1	H ±2	S±1	Part Number
		mm	mm	mm	mm	
450	15+1.5	50.0	53.0	75.0	20.0	FAF45K151U75QVMC
450	20+1.5	50.0	53.0	85.0	20.0	FAF45K201U85QVMC
450	25+3	50.0	53.0	85.0	20.0	FAF45K253U85QVMC
450	30+5	50.0	53.0	95.0	20.0	FAF45K305U95QVMC
450	35+5	50.0	53.0	105.0	20.0	FAF45K355U10QVMC
450	40+5	50.0	53.0	120.0	20.0	FAF45K405U12QVMC
450	45+5	50.0	53.0	120.0	20.0	FAF45K455U12QVMC
450	45+7.5	50.0	53.0	125.0	20.0	FAF45K458U12QVMC
450	50+5	50.0	53.0	125.0	20.0	FAF45K505U12QVMC
450	50+7.5	50.0	53.0	125.0	20.0	FAF45K508U12QVMC
450	55+7.5	55.0	58.0	125.0	20.0	FAF45K558V12QVMC
450	60+7.5	55.0	58.0	125.0	20.0	FAF45K608V12QVMC
450	65+7.5	60.0	63.0	120.0	20.0	FAF45K658W12QVMC
450	70+7.5	60.0	63.0	125.0	20.0	FAF45K708W12QVMC
450	80+10	60.0	63.0	135.0	20.0	FAF45K80AW13QVMC

\* Customized products are available by request, contact us for more details.

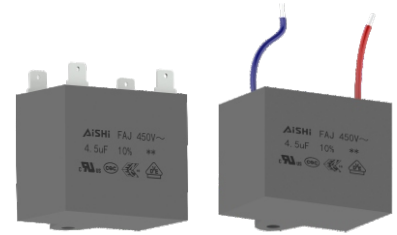
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Box Type & Safety Class S0) AC Motor Applications

## FAJ series

### Overview

The FAJ series is constructed of metallized polypropylene film encapsulated in plastic cases, sealed with epoxy resin with material meeting the requirements of UL94V-0.



### Applications

- AC motor for starting or running

### Features

- High performance and high reliability
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- Safety class S0

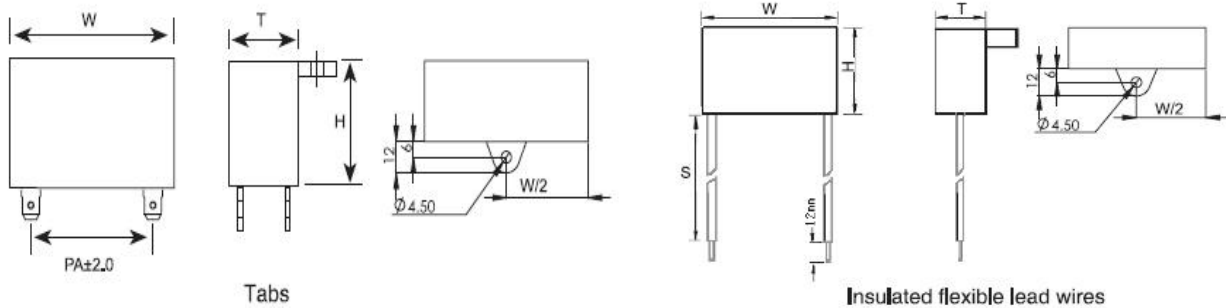
### Specifications

Items	Characteristics
Reference Standard	EN 60252-1, UL810, GB/3667.1
Climatic Category	40/85/56 IEC 60068-1
Passive Flammability Class	B
Passive Safety Class	S0
Operating Temperature Range	-40°C to +85°C
Capacitance Range	0.5μF to 10μF
Rated Voltage	450Vac / 500Vac 50/60Hz
Capacitance Tolerance	±5%、±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 1kHz at +25°C
Test Voltage Between Terminals	2.0U <sub>R</sub> VAC for 10s (terminal to terminal)
Test Voltage Terminal to Case	3000Vac 50/60Hz for 60s at +25°C
Insulation Resistance	> 15,000 MΩ (C≤0.33μF)at 100VDC 1 minute at +25°C > 5,000s (C > 0.33μF)at 100VDC 1 minute at +25°C
Class of operation	Class B or Class C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Leads	Insulated flexible lead wires or Tabs
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied: 1.35 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ): ≤40 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit

# Metallized Polypropylene Film Capacitor (Box Type & Safety Class S0) AC Motor Applications

## FAJ series

### ■ Dimensions



### ■ Dimensions - Case

Unit: mm

Case Code	W	H	T	PA	AWG
	$\pm 1.0$	$\pm 1.0$	$\pm 1.0$	$\pm 2.0$	UL1015
Q++	32	20	11	20	20
Q++	32	22	13	20	20
Q++	32	28	14	20	20
Q++	32	30	16	20	20
Q++	32	33	18	20	20
Q++	32	37	22	20	20
R++	38	22	13	25	20
R++	38	24	14	25	20
R++	38	25	15	25	20
R++	38	26	15	25	20
R++	38	26	18	25	20
R++	38	27	16	25	20
R++	38	28	14	25	20
R++	38	28	16	25	20
R++	38	28	18	25	20
R++	38	29	18	25	20
R++	38	30	16	25	20
R++	38	30	18	25	20
R++	38	31	20	25	20
R++	38	32	22	25	20
R++	38	33	18	25	20
R++	38	33	21	25	20
R++	38	34	22	25	20
R++	38	36	24	25	20
R++	38	37	22	25	20
R++	38	37	25	25	20
R++	38	38	26	25	20
R++	38	39	27	25	20
R++	38	40	28	25	20
R++	38	41	26	25	20
R++	38	42	28	25	20
R++	38	44	30	25	20
R++	38	45	30	25	20
S++	48	27	15	35	18
S++	48	28	16	35	18
S++	48	29	17	35	18
S++	48	30	18	35	18
S++	48	31	19	35	18
S++	48	32	20	35	18
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S++	48	38	26	35	18
S++	48	38	28	35	18
S++	48	40	28	35	18
S++	48	40	30	35	18
S++	48	42	30	35	18
S++	48	44	30	35	18
S++	48	45	30	35	18
S++	48	45	34	35	18

\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film Capacitor (Box Type & Safety Class S0)

## AC Motor Applications

### FAJ series

#### Technical data

Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Tabs AMP #	Part Number
		W mm	H mm	T mm	PA mm				
450	0.5	32.0	20.0	11.0	20.0	50.0	100	187	FAJ45K504Q10YVPN
450	1.0	32.0	22.0	13.0	20.0	100.0	100	187	FAJ45K105Q11YVPN
450	1.2	32.0	28.0	14.0	20.0	120.0	100	187	FAJ45K125Q12YVPN
450	1.5	32.0	28.0	14.0	20.0	150.0	100	187	FAJ45K155Q12YVPN
450	1.8	32.0	30.0	16.0	20.0	180.0	100	187	FAJ45K185Q13YVPN
450	2.0	32.0	33.0	18.0	20.0	200.0	100	187	FAJ45K205Q14YVPN
450	2.2	32.0	33.0	18.0	20.0	220.0	100	187	FAJ45K225Q14YVPN
450	2.5	32.0	33.0	18.0	20.0	250.0	100	187	FAJ45K255Q14YVPN
450	2.8	32.0	33.0	18.0	20.0	280.0	100	187	FAJ45K285Q14YVPN
450	3.0	32.0	37.0	22.0	20.0	300.0	100	187	FAJ45K305Q15YVPN
450	4.0	32.0	37.0	22.0	20.0	400.0	100	187	FAJ45K405Q15YVPN
450	1.0	38.0	22.0	13.0	25.0	80.0	80	187	FAJ45K105R10YWPN
450	1.2	38.0	22.0	13.0	25.0	96.0	80	187	FAJ45K125R10YWPN
450	1.5	38.0	28.0	14.0	25.0	120.0	80	187	FAJ45K155R16YWPN
450	1.8	38.0	28.0	14.0	25.0	144.0	80	187	FAJ45K185R16YWPN
450	2.0	38.0	28.0	16.0	25.0	160.0	80	187	FAJ45K205R17YWPN
450	2.2	38.0	28.0	16.0	25.0	176.0	80	187	FAJ45K225R17YWPN
450	2.5	38.0	30.0	18.0	25.0	200.0	80	187	FAJ45K255R21YWPN
450	2.8	38.0	30.0	18.0	25.0	224.0	80	187	FAJ45K285R21YWPN
450	3.0	38.0	33.0	18.0	25.0	240.0	80	187	FAJ45K305R24YWPN
450	4.0	38.0	37.0	22.0	25.0	320.0	80	187	FAJ45K405R28YWPN
450	4.5	38.0	37.0	22.0	25.0	360.0	80	187	FAJ45K455R28YWPN
450	5.0	38.0	37.0	22.0	25.0	400.0	80	187	FAJ45K505R28YWPN
450	5.5	38.0	41.0	26.0	25.0	440.0	80	187	FAJ45K555R33YWPN
450	6.0	38.0	41.0	26.0	25.0	480.0	80	187	FAJ45K605R33YWPN
450	6.5	38.0	41.0	26.0	25.0	520.0	80	187	FAJ45K655R33YWPN
450	7.0	38.0	45.0	30.0	25.0	560.0	80	187	FAJ45K705R36YWPN
450	7.5	38.0	45.0	30.0	25.0	600.0	80	187	FAJ45K755R36YWPN
450	8.0	38.0	45.0	30.0	25.0	640.0	80	187	FAJ45K805R36YWPN
450	8.5	38.0	45.0	30.0	25.0	680.0	80	187	FAJ45K855R36YWPN
450	2.0	48.0	27.0	15.0	35.0	100.0	50	250	FAJ45K205S10YXPN
450	2.5	48.0	27.0	15.0	35.0	125.0	50	250	FAJ45K255S10YXPN
450	3.0	48.0	28.0	16.0	35.0	150.0	50	250	FAJ45K305S11YXPN
450	4.0	48.0	30.0	18.0	35.0	200.0	50	250	FAJ45K405S13YXPN
450	4.5	48.0	33.0	19.0	35.0	225.0	50	250	FAJ45K455S16YXPN
450	5.0	48.0	33.0	21.0	35.0	250.0	50	250	FAJ45K505S17YXPN
450	5.5	48.0	34.0	22.0	35.0	275.0	50	250	FAJ45K555S18YXPN
450	6.0	48.0	36.0	24.0	35.0	300.0	50	250	FAJ45K605S20YXPN
450	6.5	48.0	36.0	24.0	35.0	325.0	50	250	FAJ45K655S20YXPN
450	7.0	48.0	36.0	24.0	35.0	350.0	50	250	FAJ45K705S20YXPN
450	7.5	48.0	38.0	26.0	35.0	375.0	50	250	FAJ45K755S22YXPN
450	8.0	48.0	40.0	28.0	35.0	400.0	50	250	FAJ45K805S24YXPN
450	8.5	48.0	40.0	28.0	35.0	425.0	50	250	FAJ45K855S24YXPN
450	9.0	48.0	40.0	28.0	35.0	450.0	50	250	FAJ45K905S24YXPN
450	9.5	48.0	44.0	30.0	35.0	475.0	50	250	FAJ45K955S27YXPN
450	10.0	48.0	45.0	30.0	35.0	500.0	50	250	FAJ45K106S28YXPN

\* Customized products are available by request, contact us for more details.

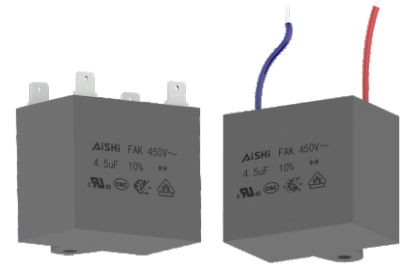
\* Specification are subject to change, please refer to approved data sheets.

# Metallized Polypropylene Film AC Motor Capacitor (Box Type & Safety Class S3) AC Applications

## FAK series

### Overview

The FAK series is constructed of segmented metallized polypropylene film encapsulated with self-extinguishing resin in plastic cases, meeting the requirements of UL94V-0.



### Applications

- AC motor for starting or running

### Features

- High performance and high reliability
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- Safety class S3, with segmented film design

### Specifications

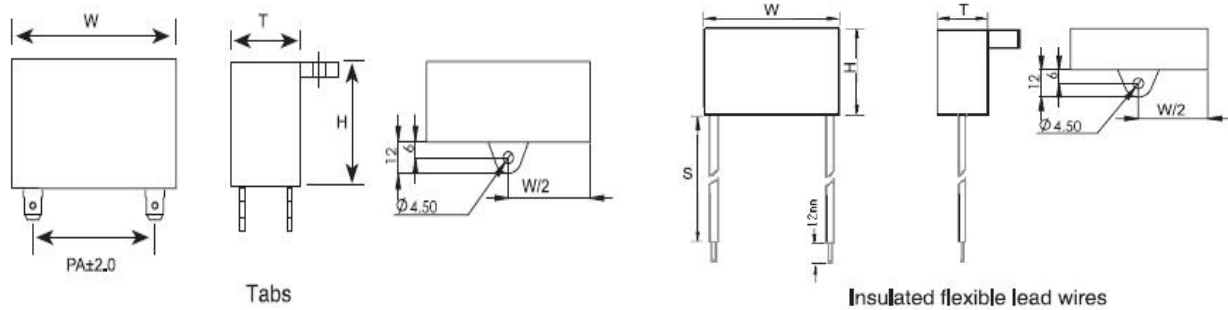
Items	Characteristics
Reference Standard	EN 60252-1, UL810, GB/3667.1
Climatic Category	40/85/56 IEC 60068-1
Passive Flammability Class	B
Passive Safety Class	S3
Operating Temperature Range	-40°C to +85°C
Capacitance Range	0.5μF to 10μF
Rated Voltage	450Vac / 500Vac 50/60Hz
Capacitance Tolerance	±5%、±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 1kHz at +25°C
Test Voltage Between Terminals	2.0U <sub>R</sub> VAC for 10s
Test Voltage Terminal to Case	3000Vac 50/60Hz for 60s at +25°C
Insulation Resistance	> 15,000 MΩ (C≤0.33μF)at 100VDC 1 minute at +25°C
	> 5,000s (C > 0.33μF)at 100VDC 1 minute at +25°C
Class of operation	Class B or Class C
Protection	Solvent resistant plastic case UL94 V-0
	Thermosetting resin sealing UL94 V-0 compliant
Installation	Any position
Leads	Insulated flexible lead wires or Tabs
Packaging	Packed in cardboard boxes with protection for the leads
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package
	Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied: 1.35 X V <sub>R</sub> (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (Δtgδ): ≤40 X 10 <sup>-4</sup> at 1KHz Insulation resistance: ≥50% of initial limit



# Metallized Polypropylene Film AC Motor Capacitor (Box Type & Safety Class S3) AC Applications

## FAK series

### ■ Dimensions



### ■ Dimensions - Case

Unit: mm

Case Code	W	H	T	PA	AWG
	$\pm 1.0$	$\pm 1.0$	$\pm 1.0$	$\pm 2.0$	UL1015
Q++	32	20	11	20	20
Q++	32	22	13	20	20
Q++	32	28	14	20	20
Q++	32	30	16	20	20
Q++	32	33	18	20	20
Q++	32	37	22	20	20
R++	38	22	13	25	20
R++	38	24	14	25	20
R++	38	25	15	25	20
R++	38	26	15	25	20
R++	38	26	18	25	20
R++	38	27	16	25	20
R++	38	28	14	25	20
R++	38	28	16	25	20
R++	38	28	18	25	20
R++	38	29	18	25	20
R++	38	30	16	25	20
R++	38	30	18	25	20
R++	38	31	20	25	20
R++	38	32	22	25	20
R++	38	33	18	25	20
R++	38	33	21	25	20
R++	38	34	22	25	20
R++	38	36	24	25	20
R++	38	37	22	25	20
R++	38	37	25	25	20
R++	38	38	26	25	20
R++	38	39	27	25	20
R++	38	40	28	25	20
R++	38	41	26	25	20
R++	38	42	28	25	20
R++	38	44	30	25	20
R++	38	45	30	25	20
S++	48	27	15	35	18
S++	48	28	16	35	18
S++	48	29	17	35	18
S++	48	30	18	35	18
S++	48	31	19	35	18
S++	48	32	20	35	18
S++	48	33	19	35	18
S++	48	33	21	35	18
S++	48	34	22	35	18
S++	48	34	24	35	18
S++	48	36	24	35	18
S++	48	37	25	35	18
S++	48	38	26	35	18
S++	48	38	28	35	18
S++	48	40	28	35	18
S++	48	40	30	35	18
S++	48	42	30	35	18
S++	48	44	30	35	18
S++	48	45	30	35	18
S++	48	45	34	35	18

# Metallized Polypropylene Film AC Motor Capacitor (Box Type & Safety Class S3) AC Applications

## FAK series

### ■ Technical data

Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Tabs AMP #	Part Number
		W mm	H mm	T mm	PA mm				
450	0.5	38.0	22.0	13.0	25.0	40.0	80	187	FAK45K504R10YWPN
450	1.0	38.0	22.0	13.0	25.0	80.0	80	187	FAK45K105R10YWPN
450	1.0	38.0	27.0	16.0	25.0	80.0	80	187	FAK45K105R15YWPN
450	1.2	38.0	24.0	14.0	25.0	96.0	80	187	FAK45K125R11YWPN
450	1.2	38.0	27.0	16.0	25.0	96.0	80	187	FAK45K125R15YWPN
450	1.4	38.0	25.0	15.0	25.0	112.0	80	187	FAK45K145R12YWPN
450	1.4	38.0	27.0	16.0	25.0	112.0	80	187	FAK45K145R15YWPN
450	1.5	38.0	30.0	16.0	25.0	120.0	80	187	FAK45K155R20YWPN
450	1.5	38.0	29.0	18.0	25.0	120.0	80	187	FAK45K155R19YWPN
450	1.6	38.0	30.0	16.0	25.0	128.0	80	187	FAK45K165R20YWPN
450	1.6	38.0	29.0	18.0	25.0	128.0	80	187	FAK45K165R19YWPN
450	1.8	38.0	30.0	16.0	25.0	144.0	80	187	FAK45K185R20YWPN
450	1.8	38.0	29.0	18.0	25.0	144.0	80	187	FAK45K185R19YWPN
450	2.0	38.0	30.0	16.0	25.0	160.0	80	187	FAK45K205R20YWPN
450	2.0	38.0	29.0	18.0	25.0	160.0	80	187	FAK45K205R19YWPN
450	2.2	38.0	29.0	18.0	25.0	176.0	80	187	FAK45K225R19YWPN
450	2.2	38.0	32.0	22.0	25.0	176.0	80	187	FAK45K225R23YWPN
450	2.5	38.0	30.0	18.0	25.0	200.0	80	187	FAK45K255R21YWPN
450	2.5	38.0	32.0	22.0	25.0	200.0	80	187	FAK45K255R23YWPN
450	2.8	38.0	31.0	20.0	25.0	224.0	80	187	FAK45K285R22YWPN
450	2.8	38.0	32.0	22.0	25.0	224.0	80	187	FAK45K285R23YWPN
450	3.0	38.0	31.0	20.0	25.0	240.0	80	187	FAK45K305R22YWPN
450	3.5	38.0	33.0	21.0	25.0	280.0	80	187	FAK45K355R25YWPN
450	4.0	38.0	34.0	22.0	25.0	320.0	80	187	FAK45K405R26YWPN
450	4.5	38.0	36.0	24.0	25.0	360.0	80	187	FAK45K455R27YWPN
450	5.0	38.0	37.0	25.0	25.0	400.0	80	187	FAK45K505R29YWPN
450	5.5	38.0	38.0	26.0	25.0	440.0	80	187	FAK45K555R30YWPN
450	6.0	38.0	39.0	27.0	25.0	480.0	80	187	FAK45K605R31YWPN
450	6.5	38.0	40.0	28.0	25.0	520.0	80	187	FAK45K655R32YWPN
450	7.0	38.0	42.0	28.0	25.0	560.0	80	187	FAK45K705R34YWPN
450	8.0	38.0	44.0	30.0	25.0	640.0	80	187	FAK45K805R35YWPN

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# Metallized Polypropylene Film AC Motor Capacitor (Box Type & Safety Class S3) AC Applications

## FAK series

### ■ Technical data

Vac	Cap Value μF	Dimensions				Peak Current A	dv/dt V/us	Tabs AMP #	Part Number
		W mm	H mm	T mm	PA mm				
450	2.5	48.0	28.0	16.0	35.0	125.0	50	250	FAK45K255S11HXP
450	3.0	48.0	29.0	17.0	35.0	150.0	50	250	FAK45K305S12HXP
450	3.5	48.0	30.0	18.0	35.0	175.0	50	250	FAK45K355S13HXP
450	3.5	48.0	34.0	24.0	35.0	175.0	50	250	FAK45K355S19HXP
450	4.0	48.0	31.0	19.0	35.0	200.0	50	250	FAK45K405S14HXP
450	4.0	48.0	34.0	24.0	35.0	200.0	50	250	FAK45K405S19HXP
450	4.5	48.0	32.0	20.0	35.0	225.0	50	250	FAK45K455S15HXP
450	4.5	48.0	34.0	24.0	35.0	225.0	50	250	FAK45K455S19HXP
450	5.0	48.0	33.0	21.0	35.0	250.0	50	250	FAK45K505S17HXP
450	5.0	48.0	34.0	24.0	35.0	250.0	50	250	FAK45K505S19HXP
450	5.5	48.0	34.0	22.0	35.0	275.0	50	250	FAK45K555S18HXP
450	5.5	48.0	34.0	24.0	35.0	275.0	50	250	FAK45K555S19HXP
450	6.0	48.0	34.0	24.0	35.0	300.0	50	250	FAK45K605S19HXP
450	6.3	48.0	34.0	24.0	35.0	315.0	50	250	FAK45K635S19HXP
450	6.5	48.0	36.0	24.0	35.0	325.0	50	250	FAK45K655S20HXP
450	6.5	48.0	34.0	24.0	35.0	325.0	50	250	FAK45K655S19HXP
450	7.0	48.0	37.0	25.0	35.0	350.0	50	250	FAK45K705S21HXP
450	7.0	48.0	40.0	30.0	35.0	350.0	50	250	FAK45K705S25HXP
450	7.5	48.0	38.0	26.0	35.0	375.0	50	250	FAK45K755S22HXP
450	7.5	48.0	40.0	30.0	35.0	375.0	50	250	FAK45K755S25HXP
450	8.0	48.0	38.0	28.0	35.0	400.0	50	250	FAK45K805S23HXP
450	8.0	48.0	40.0	30.0	35.0	400.0	50	250	FAK45K805S25HXP
450	8.5	48.0	40.0	28.0	35.0	425.0	50	250	FAK45K855S24HXP
450	8.5	48.0	40.0	30.0	35.0	425.0	50	250	FAK45K855S25HXP
450	9.0	48.0	40.0	30.0	35.0	450.0	50	250	FAK45K905S25HXP
450	9.0	48.0	45.0	34.0	35.0	450.0	50	250	FAK45K905S29HXP
450	9.5	48.0	40.0	30.0	35.0	475.0	50	250	FAK45K955S25HXP
450	9.5	48.0	45.0	34.0	35.0	475.0	50	250	FAK45K955S29HXP
450	10.0	48.0	42.0	30.0	35.0	500.0	50	250	FAK45K106S26HXP
450	10.0	48.0	45.0	34.0	35.0	500.0	50	250	FAK45K106S29HXP
450	12.0	48.0	45.0	34.0	35.0	600.0	50	250	FAK45K126S29HXP

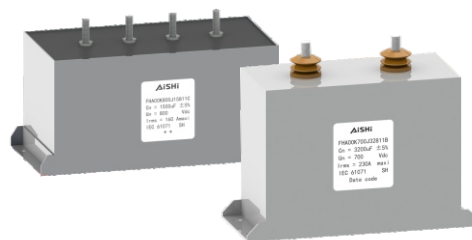
\* Customized products are available by request, contact us for more details.

\* Specification are subject to change, please refer to approved data sheets.

## FHA series

### Overview

The FHA series is constructed of metallized polypropylene film, sealed with epoxy in aluminum or stainless steel casing. The capacitors are suitable for high capacitance requirement of DC-Link circuits.



### Applications

- Energy storage
- High Voltage Direct Current (HVDC) transmission systems

### Features

- High capacitance density
- Self-healing property
- High ripple current
- High performance and high reliability

### Specifications

Items	Characteristics
Reference Standard	IEC 61071
Climatic Category	40/70/21 IEC 60068-1
Operating Temperature	-40°C ~ +70°C
Rated Voltage(Un)	450Vdc ~ 3000Vdc
Capacitance Range	1000µF ~ 20000µF
Capacitance Tolerance	±5%(J) or ±10%(K)
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 100Hz at +25°C
Test Voltage Between Terminals	1.5 x Vn for 10s at +25°C
Test Voltage Between Terminals to Case	4.0KVac 50 Hz for 60s at +25°C
Max rms current (I <sub>rms</sub> max)	140Arms to 300Arms
Max Hot-spot Temperature	≤ +85°C
Life Expectancy	100,000 hours at 1.0 Un/70°C
Storage Temperature	-40°C ~ +85°C
Mounting	Vertical or horizontal
Permissible Humidity	Annual average ≤95% on 30days/ year. Dewing not admissible
Over Voltage	1.1Un up to 8h / day 1.15Un up to 30 min / day 1.2Un up to 5 min / day 1.3Un up to 1 min / day
RoHS Compliant	Compliant with requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C±2°C    Relative humidity(RH) :93% ±2% Test duration : 21 days Capacitance change : ≤±2%
Endurance Test	Test conditions & performance: Temperature: +70°C±2°C    Voltage applied:1.3 X V <sub>R</sub> (d.c.) Test duration : 1000 hours Capacitance change : ≤±3%

## FHA series

### Terminal Configuration

Fig1. Capacitor with 2 terminals

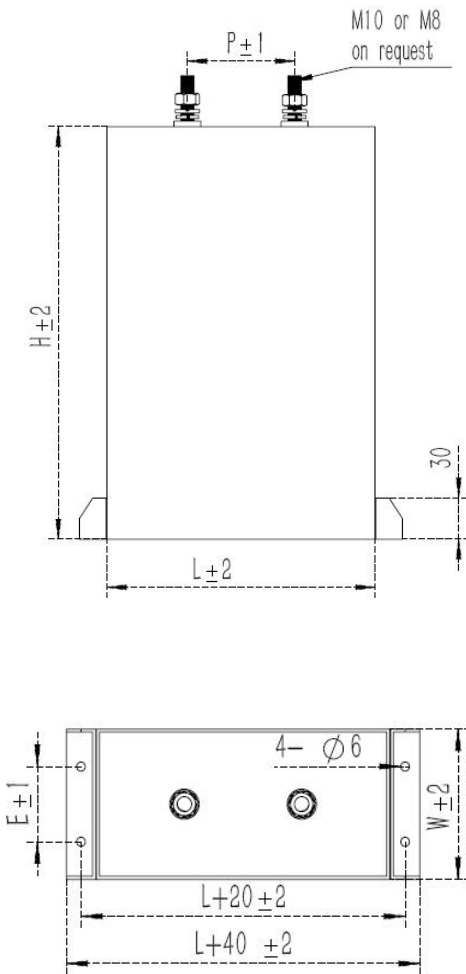
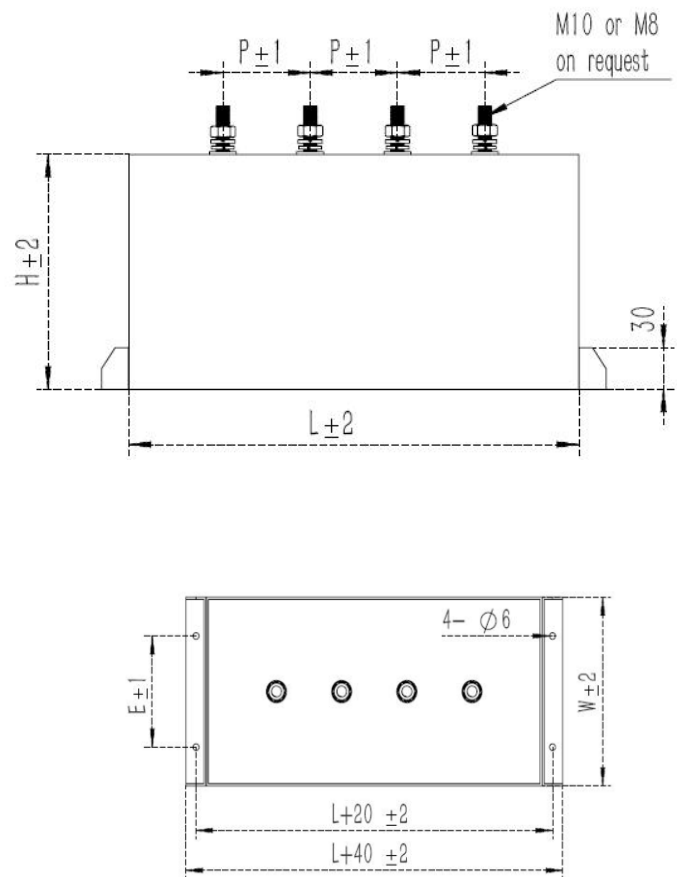


Fig2. Capacitor with 4 terminals



## FHA series

### ■ Terminal Configuration

Fig3. Capacitor with 6 terminals

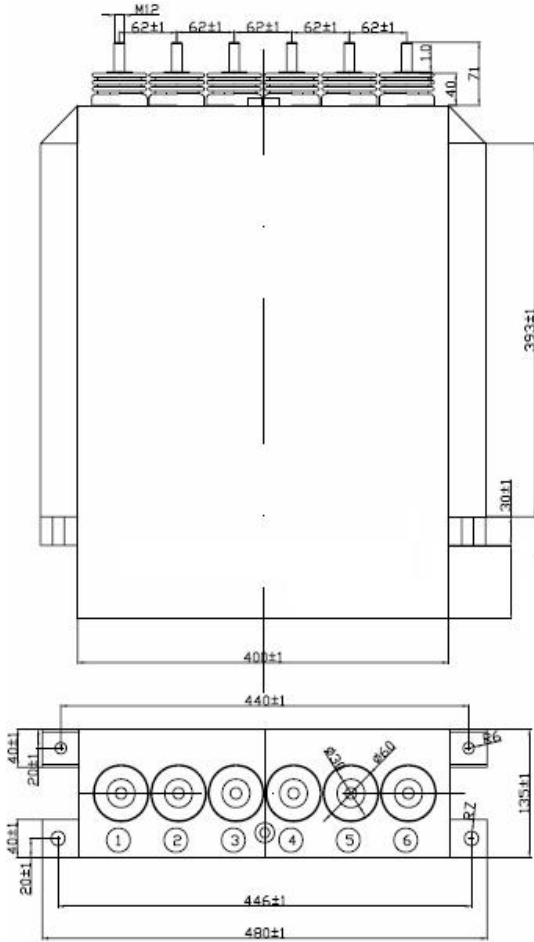
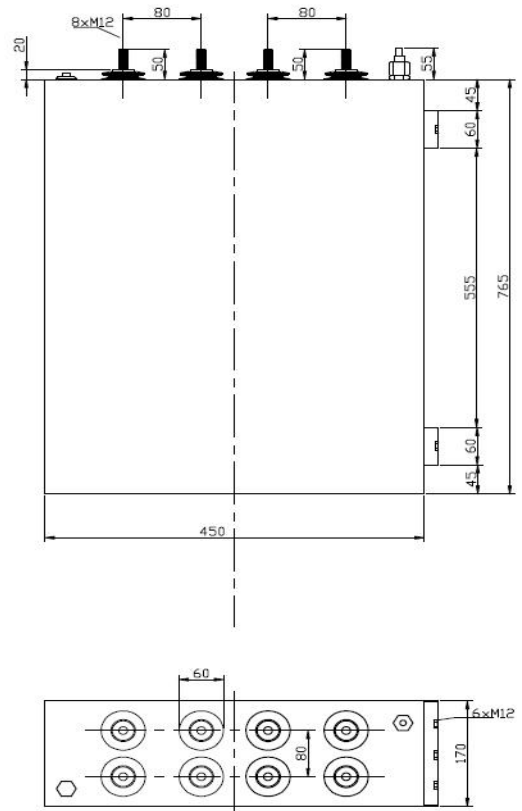


Fig4. Capacitor with 8 terminals



## FHA series

### ■ Technical data

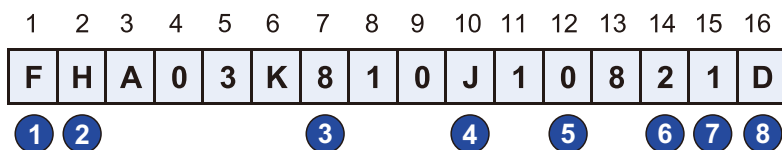
No	Ordering Code	Un (Vdc)	Cn ( $\mu$ F)	Dimension (mm)			Case Type
				L	H	W	
1	FHA00K700J32811B	700	3200	180.0	190.0	200.0	Fig 1
2	FHA00K800J15811C	800	1500	306.0	99.0	145.0	Fig 2.
3	FHA01K000J11811C	1000	1100	430.0	108.0	130.0	Fig 2.
4	FHA00K800J65811C	800	6500	340.0	245.0	125.0	Fig 2.
5	FHA00K900J17911D	900	17500	400.0	540.0	135.0	Fig 3.
6	FHA01K300J19911D	1300	19000	450.0	765.0	170.0	Fig 4.

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## FHA series

### Part numbering system



#### ① Category code

TYPE	F
CODE	Film Capacitor

#### ② Series code

TYPE	H	A
CODE	High power cap	DC filtering

#### ③ Voltage Code

VDC	230	3810	10200	15240	19000
CODE	00K230	03K810	10K200	15K240	19K000

#### ④ Tolerance Code

TOLERANCE	± 5%	± 10%	± 20%
CODE	J	K	M

#### ⑤ Capacitance Code

The first 2 digits indicate significant figures, and the third digit specifies the number of zero to follow. This gives the capacitance in picofarads. For examples:

104 = 100,000pF = 100nF = 0.1μF

105 = 1,000,000pF = 1,000nF = 1.0μF

106 = 10,000,000pF = 10,000nF = 10μF

108 = 1,000,000,000pF = 1000,000nF = 1000μF

#### ⑥ Internal caps number code

CAPS No.	CODE
1	1
2	2
3	3
4	4

#### ⑦ Version code

Version	code	Version	code
1	1	6	6
2	2	7	7
3	3	8	8
4	4	9	9
5	5	10	A

#### ⑧ Terminals code

Terminal Type	code	Terminal Type	code
Male M6	A	Female M6	F
Male M8	B	Female M8	G
Male M10	C	Female M10	H
Male M12	D	Female M12	J
Male M16	E	Female M16	K
LUG	L	SPECIAL	S