AiSHi FILM CAPACITORS 2018-2019Y Catalogue

AiSHi

Film Capacitors
2018-2019Y Catalogue

Provide Excellent Quality Film Capacitors Worldwide

www.aihuaglobal.com
Stock code: 603989

艾华集团
AIHUA GROUP

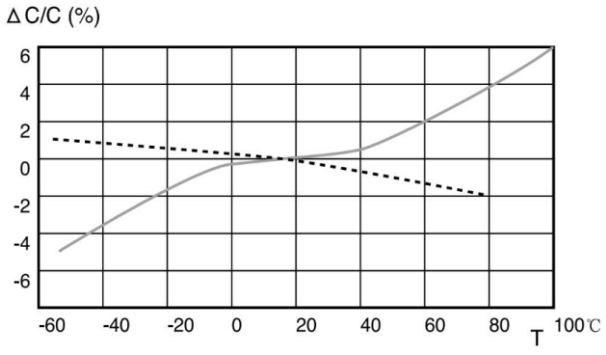
Table of Content

* THB : Temperature Humidity Bias

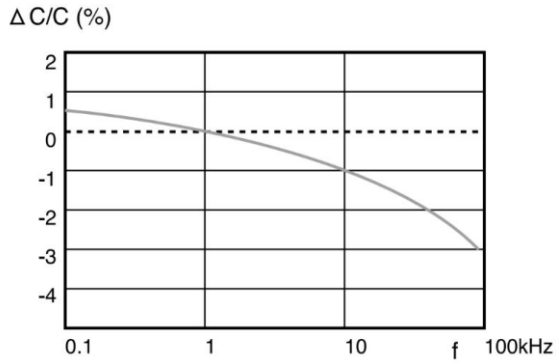
Typical dielectric features

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

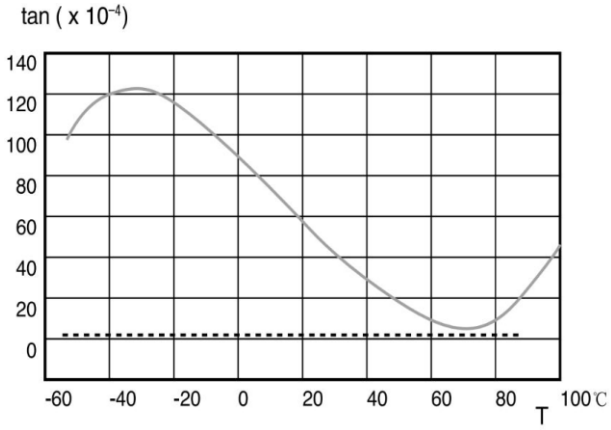
- □ Very low dissipation factor
- □ High insulation resistance
- □ High thermal stability
- □ Excellent self-healing features



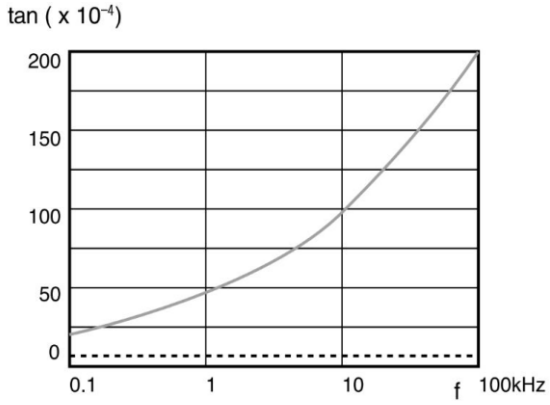
Capacitance Vs. Temperature at 1kHz



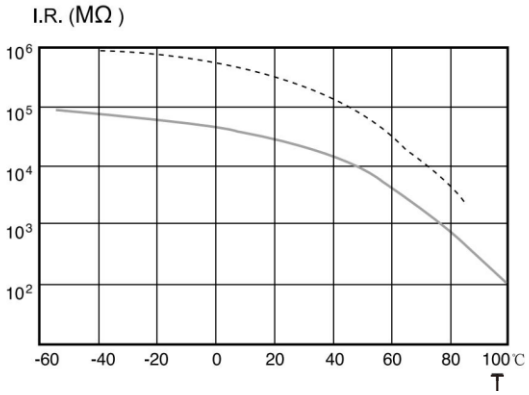
Capacitance Vs. Frequency (Room temperature)



Dissipation Vs. Temperature at 1kHz



Dissipation Vs. Frequency (Room temperature)



I.R. Vs. Temperature

-------- Polypropylene Film

——— Polyester Film

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:
Ipeak = 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^{-6} /°C) and referred to 20°C

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

C_i = Capacitance at the temperature T_i
C_0 = Capacitance at the temperature T_0 (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 (Rpol), the losses caused by the resistance of the leads, termination and electrodes (Rs) and the insulation resistance (Ris)

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

Dielectric Dissipation Factor (tan δ_d)
Constant dissipation factor of the dielectric material for all capacitors at their rated frequency. The typical loss factor of polypropylene film is $2*10^{-4}$.

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 capacior.

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.

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

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

Capacitor terminologies

Insulation Resistance (R_{is}) and Time Constant (τ)
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 ± 5s at 20 °C and a relative humidity of 50 % ± 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 (τ). 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 = Ur/2
for AC capacitor: $U = \sqrt{2}\ Urms$
for GTO snubber capacitors: U = Undc/ 2
f_0 : fundamental frequency
C: capacitance

Joule Power Loss (P_j)
Loss power induced by series resistance of the capacitor under rms current, the value is follwing:
$P_j = I^2rms \times Rs$

Capacitor Loss (Pt)
Active power dissipated in the capacitor, consist of dielectric loss and joule loss.
Pt = Pd + Pj

Resonance Frequency (f_r)
Lowest frequency at which the impedance of the capacitor becomes minimum. The value is following:

$$f_r = 1/(2\pi \times \sqrt{Ls \times Cn})$$

Maximum Operating Temperature (θ_{max})
The highest temperature of the case at which the capacitor may be operated.

Minimum Operating Temperature (θ_{min})
The lowest temperature of the case at which the capacitor may be energized.

Cooling-air Temperature (θ_{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 ($\triangle \theta_{case}$)
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 (θ_{hs})
Temperature at the hottest spot inside the capacitor. the value is following:

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

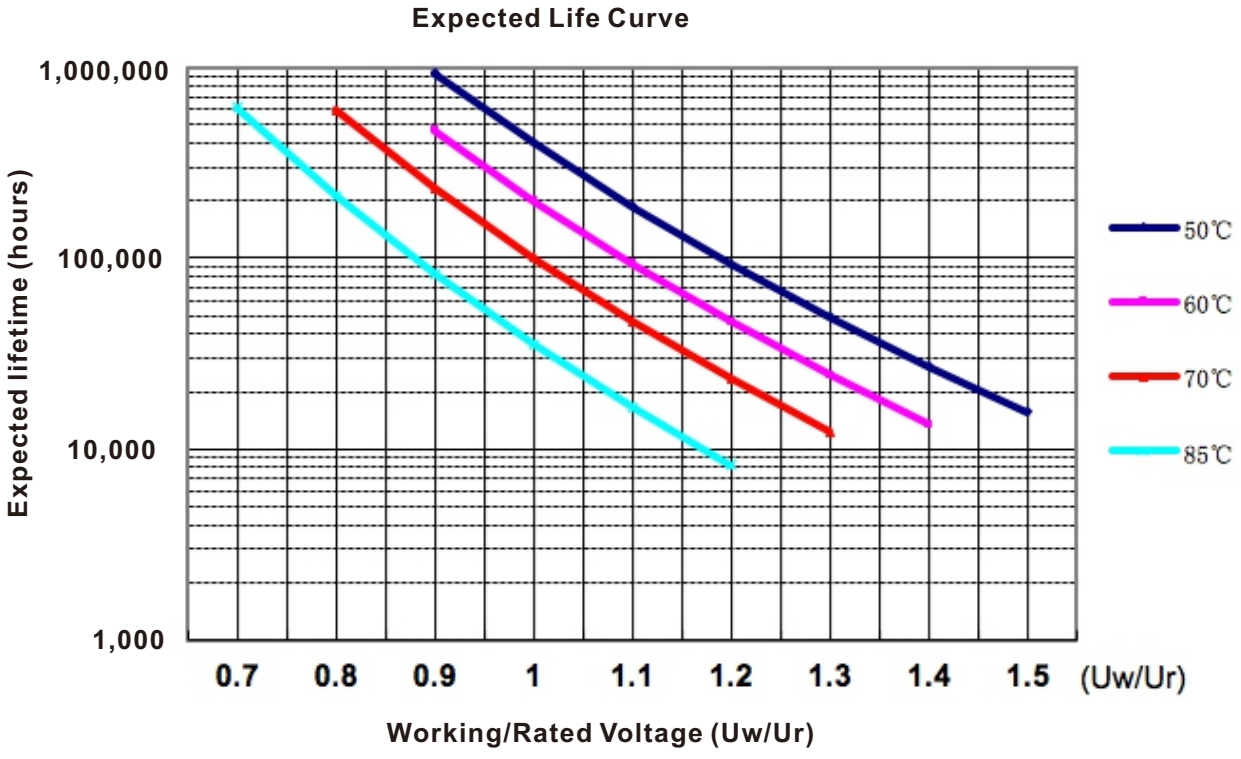
Failure rate (λ)
It indicates the failure probability of components in unit time and the value is the number of failure components in unit time compared to total number of components, the unit of λ is FIT (also expressed as Fit or fit) and 1 Fit = 1/（10^9hrs）
For example: 10 000 pcs of components work at given condition for 10000 hrs and 10 pcs of components failed, so λ =10/(10 000 x 10 000)=100 Fit

Capacitor terminologies

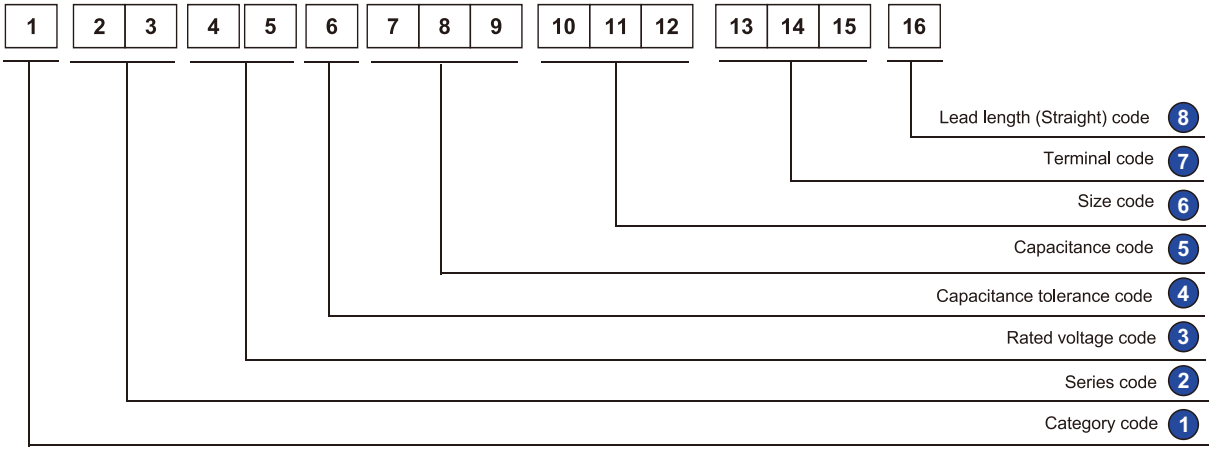
Self-Healing
Self-healing, also known as clearing is the removal of a defect caused by pinholes, film flaws or external voltage transients. The heat generated by the arcing during a breakdown, evaporates the extremely thin metallization of the film around the point of failure, thereby removing and isolating 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.



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 Capaciotr	X / Y	1~3
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	1
2000	A	2

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
0.002	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

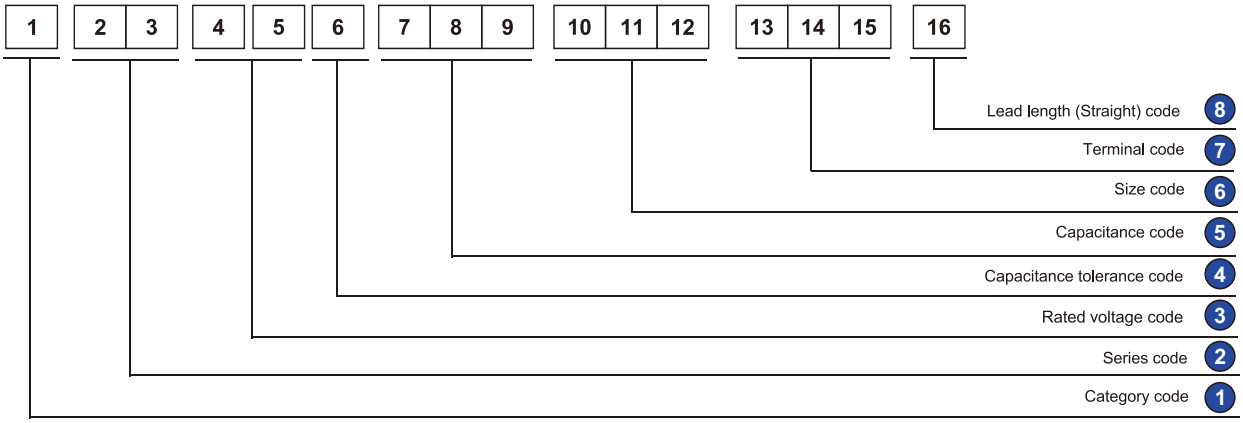
6 Size code

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

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

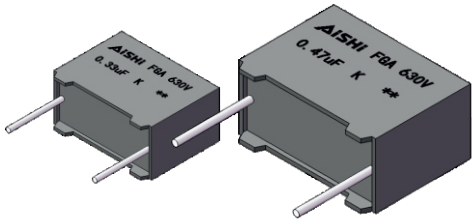
Lead length	code 16
20mm min	L
35mm min	B
3.2mm	1
3.5mm	2
4mm	3
5mm	5
7mm	7
Taping	T
N/A	N

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

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

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 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 (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied:1.25 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±5% DF change (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FGA Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
450	220	0.1	13	11	5	10	25.0	250	0.6	FGA2WK104C++2CL5
450	220	0.15	13	11	5	10	37.5	250	0.6	FGA2WK154C++2CL5
450	220	0.22	13	11	5	10	55.0	250	0.6	FGA2WK224C++2CL5
450	220	0.33	13	12	6	10	82.5	250	0.6	FGA2WK334C++2CL5
450	220	0.39	13	13	7	10	97.5	250	0.6	FGA2WK394C++2CL5
450	220	0.47	13	13	7	10	117.5	250	0.6	FGA2WK474C++2CL5
450	220	0.56	13	14	8	10	140.0	250	0.6	FGA2WK564C++2CL5
450	220	0.68	13	16	8	10	170.0	250	0.6	FGA2WK684C++2CL5
450	220	0.82	13	19	10	10	205.0	250	0.6	FGA2WK824C++2CL5
450	220	1.0	13	19	10	10	250.0	250	0.6	FGA2WK105C++2CL5
450	220	0.1	18	11	5	15	16.0	160	0.6	FGA2WK104E++2EL5
450	220	0.15	18	11	5	15	24.0	160	0.6	FGA2WK154E++2EL5
450	220	0.22	18	12	6	15	35.2	160	0.6	FGA2WK224E++2EL5
450	220	0.33	18	17.5	6	15	52.8	160	0.6	FGA2WK334E++2EL5
450	220	0.47	18	13.5	7.5	15	75.2	160	0.8	FGA2WK474E++2EL5
450	220	0.47	18	17.5	6	15	75.2	160	0.6	FGA2WK474E++2EL5
450	220	0.47	18	12.5	9	15	75.2	160	0.8	FGA2WK474E++2EL5
450	220	0.68	18	17.5	6	15	108.8	160	0.6	FGA2WK684E++2EL5
450	220	0.68	18	14.5	8.5	15	108.8	160	0.8	FGA2WK684E++2EL5
450	220	0.68	18	12	13	15	108.8	160	0.8	FGA2WK684E++2EL5
450	220	0.82	18	14.5	8.5	15	131.2	160	0.8	FGA2WK824E++2EL5
450	220	0.82	18	12	13	15	131.2	160	0.8	FGA2WK824E++2EL5
450	220	1.0	18	16	10	15	160.0	160	0.8	FGA2WK105E++2EL5
450	220	1.5	18	19	11	15	240.0	160	0.8	FGA2WK155E++2EL5
450	220	2.2	26	19	10	22.5	220.0	100	0.8	FGA2WK225F++2FL5
450	220	3.3	26	23	13	22.5	330.0	100	0.8	FGA2WK335F++2FL5
550	250	0.1	13	11	5	10	30.0	300	0.6	FGA2JK104C++2CL5
550	250	0.15	13	12	6	10	45.0	300	0.6	FGA2JK154C++2CL5
550	250	0.22	13	13	7	10	66.0	300	0.6	FGA2JK224C++2CL5
550	250	0.33	13	14	8	10	99.0	300	0.6	FGA2JK334C++2CL5
550	250	0.47	13	16	8	10	141.0	300	0.6	FGA2JK474C++2CL5
550	250	0.1	18	11	5	15	20.0	200	0.6	FGA2JK104E++2EL5
550	250	0.15	18	11	5	15	30.0	200	0.6	FGA2JK154E++2EL5
550	250	0.22	18	12	6	15	44.0	200	0.6	FGA2JK224E++2EL5
550	250	0.33	18	17.5	6	15	66.0	200	0.6	FGA2JK334E++2EL5
550	250	0.33	18	13.5	7.5	15	66.0	200	0.8	FGA2JK334E++2EL5
550	250	0.33	18	12.5	9	15	66.0	200	0.8	FGA2JK334E++2EL5
550	250	0.47	18	14.5	8.5	15	94.0	200	0.8	FGA2JK474E++2EL5
550	250	0.47	18	18	7	15	94.0	200	0.8	FGA2JK474E++2EL5
550	250	0.47	18	12	13	15	94.0	200	0.8	FGA2JK474E++2EL5
550	250	0.68	18	16	10	15	136.0	200	0.8	FGA2JK684E++2EL5
550	250	0.82	18	19	11	15	164.0	200	0.8	FGA2JK824E++2EL5
550	250	1	18	19	11	15	200.0	200	0.8	FGA2JK105E++2EL5
550	250	1.5	26	20	11	22.5	180.0	120	0.8	FGA2JK155F++2FL5
550	250	2.2	26	23	13	22.5	264.0	120	0.8	FGA2JK225F++2FL5

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

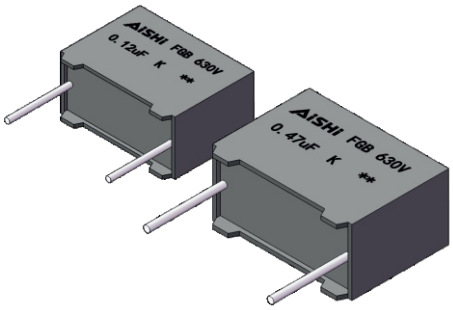
FGA Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
630	275	0.01	13	11	5	10	4.0	400	0.6	FGA2LK103C++2CL5
630	275	0.015	13	11	5	10	6.0	400	0.6	FGA2LK153C++2CL5
630	275	0.022	13	11	5	10	8.8	400	0.6	FGA2LK223C++2CL5
630	275	0.033	13	11	5	10	13.2	400	0.6	FGA2LK333C++2CL5
630	275	0.047	13	11	5	10	18.8	400	0.6	FGA2LK473C++2CL5
630	275	0.068	13	12	6	10	27.2	400	0.6	FGA2LK683C++2CL5
630	275	0.082	13	12	6	10	32.8	400	0.6	FGA2LK823C++2CL5
630	275	0.1	13	12	6	10	40.0	400	0.6	FGA2LK104C++2CL5
630	275	0.047	18	11	5	15	11.8	250	0.6	FGA2LK473E++2EL5
630	275	0.056	18	11	5	15	14.0	250	0.6	FGA2LK563E++2EL5
630	275	0.068	18	11	5	15	17.0	250	0.6	FGA2LK683E++2EL5
630	275	0.082	18	11	5	15	20.5	250	0.6	FGA2LK823E++2EL5
630	275	0.100	18	11	5	15	25.0	250	0.6	FGA2LK104E++2EL5
630	275	0.15	18	12	6	15	37.5	250	0.6	FGA2LK154E++2EL5
630	275	0.22	18	17.5	6	15	55.0	250	0.6	FGA2LK224E++2EL5
630	275	0.22	18	13.5	7.5	15	55.0	250	0.8	FGA2LK224E++2EL5
630	275	0.22	18	12.5	9	15	55.0	250	0.8	FGA2LK224E++2EL5
630	275	0.33	18	18	7	15	82.5	250	0.8	FGA2LK334E++2EL5
630	275	0.33	18	14.5	8.5	15	82.5	250	0.8	FGA2LK334E++2EL5
630	275	0.33	18	12.5	9	15	82.5	250	0.8	FGA2LK334E++2EL5
630	275	0.47	18	18	7	15	117.5	250	0.8	FGA2LK474E++2EL5
630	275	0.47	18	16	10	15	117.5	250	0.8	FGA2LK474E++2EL5
630	275	0.47	18	12	13	15	117.5	250	0.8	FGA2LK474E++2EL5
630	275	0.68	18	19	10	15	170.0	250	0.8	FGA2LK684E++2EL5
630	275	0.82	26	19	10	22.5	131.2	160	0.8	FGA2LK824F++2FL5
630	275	1.0	26	20	11	22.5	160.0	160	0.8	FGA2LK105F++2FL5

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

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

- Widely used in high frequency.
- DC/AC and pulse circuits.
- Ballasts and 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 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 (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied:1.25 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±5% DF change (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FGB Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
100	50	0.1	13	11	5	10	18.0	180	0.6	FGB1KJ104C++2CL5
100	50	0.12	13	11	5	10	21.6	180	0.6	FGB1KJ124C++2CL5
100	50	0.15	13	11	5	10	27.0	180	0.6	FGB1KJ154C++2CL5
100	50	0.18	13	12	6	10	32.4	180	0.6	FGB1KJ184C++2CL5
100	50	0.22	13	12	6	10	39.6	180	0.6	FGB1KJ224C++2CL5
100	50	0.27	18	12	6	15	27.0	100	0.6	FGB1KJ274E++2EL5
100	50	0.33	18	12	6	15	33.0	100	0.6	FGB1KJ334E++2EL5
100	50	0.39	18	13.5	7.5	15	39.0	100	0.8	FGB1KJ394E++2EL5
100	50	0.47	18	13.5	7.5	15	47.0	100	0.8	FGB1KJ474E++2EL5
100	50	0.56	18	14.5	8.5	15	56.0	100	0.8	FGB1KJ564E++2EL5
100	50	0.68	18	14.5	8.5	15	68.0	100	0.8	FGB1KJ684E++2EL5
100	50	0.82	18	16	10	15	82.0	100	0.8	FGB1KJ824E++2EL5
100	50	1.0	18	16	10	15	100.0	100	0.8	FGB1KJ105E++2EL5
100	50	1.2	26	17	8.5	22.5	72.0	60	0.8	FGB1KJ125F++2FL5
100	50	1.5	26	19	10	22.5	90.0	60	0.8	FGB1KJ155F++2FL5
100	50	1.8	26	19	10	22.5	108.0	60	0.8	FGB1KJ185F++2FL5
100	50	2.2	32	20	11	27.5	110.0	50	0.8	FGB1KJ225G++2GL5
100	50	2.7	32	20	11	27.5	135.0	50	0.8	FGB1KJ275G++2GL5
100	50	3.3	32	22	13	27.5	165.0	50	0.8	FGB1KJ335G++2GL5
100	50	3.9	32	22	13	27.5	195.0	50	0.8	FGB1KJ395G++2GL5
100	50	4.7	32	24.5	13	27.5	235.0	50	0.8	FGB1KJ475G++2GL5
100	50	5.6	32	28	14	27.5	280.0	50	0.8	FGB1KJ565G++2GL5
100	50	6.8	32	33	18	27.5	340.0	50	0.8	FGB1KJ685G++2GL5
100	50	8.2	32	33	18	27.5	410.0	50	0.8	FGB1KJ825G++2GL5
100	50	10	32	31	21	27.5	500.0	50	0.8	FGB1KJ106G++2GL5
100	50	10	32	37	22	27.5	500.0	50	0.8	FGB1KJ106G++2GL5
100	50	12	32	37	22	27.5	600.0	50	0.8	FGB1KJ126G++2GL5
100	50	12	42.5	32	19	37.5	420.0	35	1.0	FGB1KJ126K++2KL5
100	50	15	42.5	40	20	37.5	525.0	35	1.0	FGB1KJ156K++2KL5
100	50	18	42.5	40	20	37.5	630.0	35	1.0	FGB1KJ186K++2KL5
100	50	22	42.5	44	24	37.5	770.0	35	1.0	FGB1KJ226K++2KL5
100	50	27	42.5	45	30	37.5	945.0	35	1.0	FGB1KJ276K++2KL5
100	50	33	42.5	45	30	37.5	1155.0	35	1.0	FGB1KJ336K++2KL5

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

FGB Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
250	160	0.033	13	11	5	10	18.2	550	0.6	FGB2EJ333C++2CL5
250	160	0.039	13	11	5	10	21.5	550	0.6	FGB2EJ393C++2CL5
250	160	0.047	13	11	5	10	25.9	550	0.6	FGB2EJ473C++2CL5
250	160	0.056	13	11	5	10	30.8	550	0.6	FGB2EJ563C++2CL5
250	160	0.068	13	11	5	10	37.4	550	0.6	FGB2EJ683C++2CL5
250	160	0.082	13	11	5	10	45.1	550	0.6	FGB2EJ823C++2CL5
250	160	0.1	13	11	5	10	55.0	550	0.6	FGB2EJ104C++2CL5
250	160	0.12	13	12	6	10	66.0	550	0.6	FGB2EJ124C++2CL5
250	160	0.15	13	12	6	10	82.5	550	0.6	FGB2EJ154C++2CL5
250	160	0.18	18	11	5	15	54.0	300	0.6	FGB2EJ184E++2EL5
250	160	0.22	18	11	5	15	66.0	300	0.6	FGB2EJ224E++2EL5
250	160	0.27	18	12	6	15	81.0	300	0.6	FGB2EJ274E++2EL5
250	160	0.33	18	12	6	15	99.0	300	0.6	FGB2EJ334E++2EL5
250	160	0.39	18	13.5	7.5	15	117.0	300	0.8	FGB2EJ394E++2EL5
250	160	0.47	18	13.5	7.5	15	141.0	300	0.8	FGB2EJ474E++2EL5
250	160	0.56	18	13.5	7.5	15	168.0	300	0.8	FGB2EJ564E++2EL5
250	160	0.68	18	14.5	8.5	15	204.0	300	0.8	FGB2EJ684E++2EL5
250	160	0.82	18	16	10	15	246.0	300	0.8	FGB2EJ824E++2EL5
250	160	1	18	16	10	15	300.0	300	0.8	FGB2EJ105E++2EL5
250	160	1.2	18	19	11	15	360.0	300	0.8	FGB2EJ125E++2EL5
250	160	1.2	26	17	8.5	22.5	150.0	125	0.8	FGB2EJ125F++2FL5
250	160	1.5	26	19	10	22.5	187.5	125	0.8	FGB2EJ155F++2FL5
250	160	1.8	26	19	10	22.5	225.0	125	0.8	FGB2EJ185F++2FL5
250	160	2.2	26	20	11	22.5	275.0	125	0.8	FGB2EJ225F++2FL5
250	160	2.7	26	23	13	22.5	337.5	125	0.8	FGB2EJ275F++2FL5
250	160	3.3	26	23	13	22.5	412.5	125	0.8	FGB2EJ335F++2FL5
250	160	3.9	32	22	13	27.5	390.0	100	0.8	FGB2EJ395G++2GL5
250	160	4.7	32	24.5	13	27.5	470.0	100	0.8	FGB2EJ475G++2GL5
250	160	5.6	32	28	14	27.5	560.0	100	0.8	FGB2EJ565G++2GL5
250	160	6.8	32	33	18	27.5	680.0	100	0.8	FGB2EJ685G++2GL5
250	160	8.2	32	33	18	27.5	820.0	100	0.8	FGB2EJ825G++2GL5
250	160	10	32	37	22	27.5	1000.0	100	0.8	FGB2EJ106G++2GL5
250	160	12	42	32	19	37.5	480.0	40	1.0	FGB2EJ126K++2KL5
250	160	15	42	40	20	37.5	600.0	40	1.0	FGB2EJ156K++2KL5
250	160	22	42	44	22	37.5	880.0	40	1.0	FGB2EJ226K++2KL5
250	160	30	42	45	30	37.5	1200.0	40	1.0	FGB2EJ306K++2KL5

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

FGB Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
400	220	0.015	13	11	5	10	18.0	1200	0.6	FGB2GJ153C++2CL5
400	220	0.018	13	11	5	10	21.6	1200	0.6	FGB2GJ183C++2CL5
400	220	0.022	13	11	5	10	26.4	1200	0.6	FGB2GJ223C++2CL5
400	220	0.027	13	11	5	10	32.4	1200	0.6	FGB2GJ273C++2CL5
400	220	0.033	13	11	5	10	39.6	1200	0.6	FGB2GJ333C++2CL5
400	220	0.039	13	11	5	10	46.8	1200	0.6	FGB2GJ393C++2CL5
400	220	0.047	13	11	5	10	56.4	1200	0.6	FGB2GJ473C++2CL5
400	220	0.056	13	12	6	10	67.2	1200	0.6	FGB2GJ563C++2CL5
400	220	0.068	13	12	6	10	81.6	1200	0.6	FGB2GJ683C++2CL5
400	220	0.082	18	11	5	15	65.6	800	0.6	FGB2GJ823E++2EL5
400	220	0.10	18	11	5	15	80.0	800	0.6	FGB2GJ104E++2EL5
400	220	0.12	18	12	6	15	96.0	800	0.6	FGB2GJ124E++2EL5
400	220	0.15	18	12	6	15	120.0	800	0.6	FGB2GJ154E++2EL5
400	220	0.18	18	13.5	7.5	15	144.0	800	0.8	FGB2GJ184E++2EL5
400	220	0.22	18	13.5	7.5	15	176.0	800	0.8	FGB2GJ224E++2EL5
400	220	0.27	18	13.5	7.5	15	216.0	800	0.8	FGB2GJ274E++2EL5
400	220	0.33	18	14.5	8.5	15	264.0	800	0.8	FGB2GJ334E++2EL5
400	220	0.39	18	16	10	15	312.0	800	0.8	FGB2GJ394E++2EL5
400	220	0.47	18	16	10	15	376.0	800	0.8	FGB2GJ474E++2EL5
400	220	0.56	18	19	11	15	448.0	800	0.8	FGB2GJ564E++2EL5
400	220	0.68	26	19	10	22.5	204.0	300	0.8	FGB2GJ684F++2FL5
400	220	0.82	26	19	10	22.5	246.0	300	0.8	FGB2GJ824F++2FL5
400	220	1	26	20	11	22.5	300.0	300	0.8	FGB2GJ105F++2FL5
400	220	1.2	26	23	13	22.5	360.0	300	0.8	FGB2GJ125F++2FL5
400	220	1.5	26	23	13	22.5	450.0	300	0.8	FGB2GJ155F++2FL5
400	220	1.8	32	22	13	27.5	234.0	130	0.8	FGB2GJ185G++2GL5
400	220	2.2	32	24.5	13	27.5	286.0	130	0.8	FGB2GJ225G++2GL5
400	220	2.7	32	28	14	27.5	351.0	130	0.8	FGB2GJ275G++2GL5
400	220	3.3	32	33	18	27.5	429.0	130	0.8	FGB2GJ335G++2GL5
400	220	3.9	32	33	18	27.5	507.0	130	0.8	FGB2GJ395G++2GL5
400	220	4.7	32	37	22	27.5	611.0	130	0.8	FGB2GJ475G++2GL5
400	220	5.6	42	32	19	37.5	392.0	70	1.0	FGB2GJ565K++2KL5
400	220	6.8	42	40	20	37.5	476.0	70	1.0	FGB2GJ685K++2KL5
400	220	8.2	42	40	20	37.5	574.0	70	1.0	FGB2GJ825K++2KL5
400	220	10	42	44	22	37.5	700.0	70	1.0	FGB2GJ106K++2KL5
400	220	12	42	45	30	37.5	840.0	70	1.0	FGB2GJ126K++2KL5

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

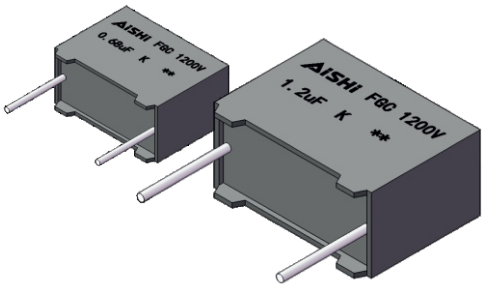
FGB Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
630	250	0.01	13	11	5	10	15.0	1500	0.6	FGB2LJ103C++2CL5
630	250	0.012	13	11	5	10	18.0	1500	0.6	FGB2LJ123C++2CL5
630	250	0.015	13	11	5	10	22.5	1500	0.6	FGB2LJ153C++2CL5
630	250	0.018	13	11	5	10	27.0	1500	0.6	FGB2LJ183C++2CL5
630	250	0.022	13	12	6	10	33.0	1500	0.6	FGB2LJ223C++2CL5
630	250	0.027	18	11	5	15	27.0	1000	0.6	FGB2LJ273E++2EL5
630	250	0.033	18	11	5	15	33.0	1000	0.6	FGB2LJ333E++2EL5
630	250	0.039	18	11	5	15	39.0	1000	0.6	FGB2LJ393E++2EL5
630	250	0.047	18	11	5	15	47.0	1000	0.6	FGB2LJ473E++2EL5
630	250	0.056	18	11	5	15	56.0	1000	0.6	FGB2LJ563E++2EL5
630	250	0.068	18	12	6	15	68.0	1000	0.6	FGB2LJ683E++2EL5
630	250	0.082	18	12	6	15	82.0	1000	0.6	FGB2LJ823E++2EL5
630	250	0.1	18	13.5	7.5	15	100.0	1000	0.8	FGB2LJ104E++2EL5
630	250	0.12	18	13.5	7.5	15	120.0	1000	0.8	FGB2LJ124E++2EL5
630	250	0.15	18	14.5	8.5	15	150.0	1000	0.8	FGB2LJ154E++2EL5
630	250	0.18	18	16	10	15	180.0	1000	0.8	FGB2LJ184E++2EL5
630	250	0.22	18	16	10	15	220.0	1000	0.8	FGB2LJ224E++2EL5
630	250	0.27	18	19	11	15	270.0	1000	0.8	FGB2LJ274E++2EL5
630	250	0.33	18	19	11	15	330.0	1000	0.8	FGB2LJ334E++2EL5
630	250	0.39	26	19	10	22.5	156.0	400	0.8	FGB2LJ394F++2FL5
630	250	0.47	26	20	11	22.5	188.0	400	0.8	FGB2LJ474F++2FL5
630	250	0.56	26	20	11	22.5	224.0	400	0.8	FGB2LJ564F++2FL5
630	250	0.68	26	23	13	22.5	272.0	400	0.8	FGB2LJ684F++2FL5
630	250	0.82	32	22	13	27.5	147.6	180	0.8	FGB2LJ824G++2GL5
630	250	1.0	32	22	13	27.5	180.0	180	0.8	FGB2LJ105G++2GL5
630	250	1.2	32	28	14	27.5	216.0	180	0.8	FGB2LJ125G++2GL5
630	250	1.5	32	28	14	27.5	270.0	180	0.8	FGB2LJ155G++2GL5
630	250	1.8	32	33	18	27.5	324.0	180	0.8	FGB2LJ185G++2GL5
630	250	2.2	32	33	18	27.5	396.0	180	0.8	FGB2LJ225G++2GL5
630	250	2.7	32	37	22	27.5	486.0	180	0.8	FGB2LJ275G++2GL5
630	250	3.3	42	32	19	37.5	297.0	90	1.0	FGB2LJ335K++2KL5
630	250	3.9	42	40	20	37.5	351.0	90	1.0	FGB2LJ395K++2KL5
630	250	4.7	42	40	20	37.5	423.0	90	1.0	FGB2LJ475K++2KL5
630	250	5.6	42	44	22	37.5	504.0	90	1.0	FGB2LJ565K++2KL5
630	250	6.8	42	45	30	37.5	612.0	90	1.0	FGB2LJ685K++2KL5

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

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 2002/95/EC
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10℃ ~ +40℃ and not more than 75%RH . RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40℃ ±2℃ Relative humidity(RH) :93% ±2%
	Test duration : 56 days
	Capacitance change : ±3% DF change (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105℃ ±2℃ Voltage applied:1.25 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ±3% DF change (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FGC Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
630	400	0.0039	13	9	4	10	11.7	3000	0.6	FGC2LJ392C++2CL5
630	400	0.0047	13	9	4	10	14.1	3000	0.6	FGC2LJ472C++2CL5
630	400	0.0056	13	9	4	10	16.8	3000	0.6	FGC2LJ562C++2CL5
630	400	0.0068	13	9	4	10	20.4	3000	0.6	FGC2LJ682C++2CL5
630	400	0.0082	13	9	4	10	24.6	3000	0.6	FGC2LJ822C++2CL5
630	400	0.01	13	11	5	10	30.0	3000	0.6	FGC2LJ103C++2CL5
630	400	0.012	13	11	5	10	36.0	3000	0.6	FGC2LJ123C++2CL5
630	400	0.015	13	12	6	10	45.0	3000	0.6	FGC2LJ153C++2CL5
630	400	0.018	13	12	6	10	54.0	3000	0.6	FGC2LJ183C++2CL5
630	400	0.02	13	13	7	10	60.0	3000	0.6	FGC2LJ203C++2CL5
630	400	0.022	13	13	7	10	66.0	3000	0.6	FGC2LJ223C++2CL5
630	400	0.01	18	11	5	15	25.0	2500	0.6	FGC2LJ103E++2EL5
630	400	0.012	18	11	5	15	30.0	2500	0.6	FGC2LJ123E++2EL5
630	400	0.015	18	11	5	15	37.5	2500	0.6	FGC2LJ153E++2EL5
630	400	0.018	18	11	5	15	45.0	2500	0.6	FGC2LJ183E++2EL5
630	400	0.02	18	11	5	15	50.0	2500	0.6	FGC2LJ203E++2EL5
630	400	0.022	18	11	5	15	55.0	2500	0.6	FGC2LJ223E++2EL5
630	400	0.027	18	12	6	15	67.5	2500	0.6	FGC2LJ273E++2EL5
630	400	0.033	18	12	6	15	82.5	2500	0.6	FGC2LJ333E++2EL5
630	400	0.039	18	12	6	15	97.5	2500	0.6	FGC2LJ393E++2EL5
630	400	0.047	18	13.5	7.5	15	117.5	2500	0.8	FGC2LJ473E++2EL5
630	400	0.056	18	13.5	7.5	15	140.0	2500	0.8	FGC2LJ563E++2EL5
630	400	0.068	18	14.5	8.5	15	170.0	2500	0.8	FGC2LJ683E++2EL5
630	400	0.082	18	16	10	15	205.0	2500	0.8	FGC2LJ823E++2EL5
630	400	0.1	18	16	10	15	250.0	2500	0.8	FGC2LJ104E++2EL5
630	400	0.12	18	19	11	15	300.0	2500	0.8	FGC2LJ124E++2EL5
630	400	0.12	26	16.5	7	22.5	180.0	1500	0.8	FGC2LJ124F++2FL5
630	400	0.15	26	17	8.5	22.5	225.0	1500	0.8	FGC2LJ154F++2FL5
630	400	0.18	26	17	8.5	22.5	270.0	1500	0.8	FGC2LJ184F++2FL5
630	400	0.22	26	19	10	22.5	330.0	1500	0.8	FGC2LJ224F++2FL5
630	400	0.27	26	20	11	22.5	405.0	1500	0.8	FGC2LJ274F++2FL5
630	400	0.33	26	20	11	22.5	495.0	1500	0.8	FGC2LJ334F++2FL5
630	400	0.39	26	22	13	22.5	585.0	1500	0.8	FGC2LJ394F++2FL5
630	400	0.47	32	22	13	27.5	423.0	900	0.8	FGC2LJ474G++2GL5
630	400	0.56	32	22	13	27.5	504.0	900	0.8	FGC2LJ564G++2GL5
630	400	0.68	32	25	13	27.5	612.0	900	0.8	FGC2LJ684G++2GL5
630	400	0.82	32	28	14	27.5	738.0	900	0.8	FGC2LJ824G++2GL5
630	400	1	32	33	18	27.5	900.0	900	0.8	FGC2LJ105G++2GL5
630	400	1.2	32	33	18	27.5	1080.0	900	0.8	FGC2LJ125G++2GL5
630	400	1.5	32	37	22	27.5	1350.0	900	0.8	FGC2LJ155G++2GL5
630	400	1.8	32	37	22	27.5	1620.0	900	0.8	FGC2LJ185G++2GL5
630	400	2.2	42	40	20	37.5	1100.0	500	1.0	FGC2LJ225K++2KL5
630	400	2.7	42	40	20	37.5	1350.0	500	1.0	FGC2LJ275K++2KL5
630	400	3.3	42	44	22	37.5	1650.0	500	1.0	FGC2LJ335K++2KL5
630	400	3.9	42	45	30	37.5	1950.0	500	1.0	FGC2LJ395K++2KL5
630	400	4.7	42	45	30	37.5	2350.0	500	1.0	FGC2LJ475K++2KL5

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

FGC Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
1000	500	0.0039	13	9	4	10	11.7	3000	0.6	FGC3KJ392C++2CL5
1000	500	0.0047	13	9	4	10	14.1	3000	0.6	FGC3KJ472C++2CL5
1000	500	0.0056	13	9	4	10	16.8	3000	0.6	FGC3KJ562C++2CL5
1000	500	0.0068	13	9	4	10	20.4	3000	0.6	FGC3KJ682C++2CL5
1000	500	0.0082	13	9	4	10	24.6	3000	0.6	FGC3KJ822C++2CL5
1000	500	0.01	13	11	5	10	30.0	3000	0.6	FGC3KJ103C++2CL5
1000	500	0.012	13	11	5	10	36.0	3000	0.6	FGC3KJ123C++2CL5
1000	500	0.015	13	12	6	10	45.0	3000	0.6	FGC3KJ153C++2CL5
1000	500	0.018	13	12	6	10	54.0	3000	0.6	FGC3KJ183C++2CL5
1000	500	0.02	13	13	7	10	60.0	3000	0.6	FGC3KJ203C++2CL5
1000	500	0.022	13	13	7	10	66.0	3000	0.6	FGC3KJ223C++2CL5
1000	500	0.01	18	11	5	15	25.0	2500	0.6	FGC3KJ103E++2EL5
1000	500	0.012	18	11	5	15	30.0	2500	0.6	FGC3KJ123E++2EL5
1000	500	0.015	18	11	5	15	37.5	2500	0.6	FGC3KJ153E++2EL5
1000	500	0.018	18	11	5	15	45.0	2500	0.6	FGC3KJ183E++2EL5
1000	500	0.02	18	11	5	15	50.0	2500	0.6	FGC3KJ203E++2EL5
1000	500	0.022	18	11	5	15	55.0	2500	0.6	FGC3KJ223E++2EL5
1000	500	0.027	18	12	6	15	67.5	2500	0.6	FGC3KJ273E++2EL5
1000	500	0.033	18	12	6	15	82.5	2500	0.6	FGC3KJ333E++2EL5
1000	500	0.039	18	12	6	15	97.5	2500	0.6	FGC3KJ393E++2EL5
1000	500	0.047	18	13.5	7.5	15	117.5	2500	0.8	FGC3KJ473E++2EL5
1000	500	0.056	18	13.5	7.5	15	140.0	2500	0.8	FGC3KJ563E++2EL5
1000	500	0.068	18	14.5	8.5	15	170.0	2500	0.8	FGC3KJ683E++2EL5
1000	500	0.082	18	16	10	15	205.0	2500	0.8	FGC3KJ823E++2EL5
1000	500	0.1	18	16	10	15	250.0	2500	0.8	FGC3KJ104E++2EL5
1000	500	0.12	18	19	11	15	300.0	2500	0.8	FGC3KJ124E++2EL5
1000	500	0.12	26	16.5	7	22.5	180.0	1500	0.8	FGC3KJ124F++2FL5
1000	500	0.15	26	17	8.5	22.5	225.0	1500	0.8	FGC3KJ154F++2FL5
1000	500	0.18	26	17	8.5	22.5	270.0	1500	0.8	FGC3KJ184F++2FL5
1000	500	0.22	26	19	10	22.5	330.0	1500	0.8	FGC3KJ224F++2FL5
1000	500	0.27	26	20	11	22.5	405.0	1500	0.8	FGC3KJ274F++2FL5
1000	500	0.33	26	20	11	22.5	495.0	1500	0.8	FGC3KJ334F++2FL5
1000	500	0.39	26	22	13	22.5	585.0	1500	0.8	FGC3KJ394F++2FL5
1000	500	0.47	32	22	13	27.5	423.0	900	0.8	FGC3KJ474G++2GL5
1000	500	0.56	32	22	13	27.5	504.0	900	0.8	FGC3KJ564G++2GL5
1000	500	0.68	32	25	13	27.5	612.0	900	0.8	FGC3KJ684G++2GL5
1000	500	0.82	32	28	14	27.5	738.0	900	0.8	FGC3KJ824G++2GL5
1000	500	1	32	33	18	27.5	900.0	900	0.8	FGC3KJ105G++2GL5
1000	500	1.2	32	33	18	27.5	1080.0	900	0.8	FGC3KJ125G++2GL5
1000	500	1.5	32	37	22	27.5	1350.0	900	0.8	FGC3KJ155G++2GL5
1000	500	1.8	32	37	22	27.5	1620.0	900	0.8	FGC3KJ185G++2GL5
1000	500	2.2	42	40	20	37.5	1100.0	500	1.0	FGC3KJ225K++2KL5
1000	500	2.7	42	40	20	37.5	1350.0	500	1.0	FGC3KJ275K++2KL5
1000	500	3.3	42	44	22	37.5	1650.0	500	1.0	FGC3KJ335K++2KL5
1000	500	3.9	42	45	30	37.5	1950.0	500	1.0	FGC3KJ395K++2KL5
1000	500	4.7	42	45	30	37.5	2350.0	500	1.0	FGC3KJ475K++2KL5

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

FGC Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
1200	600	0.001	13	9	4	10	4.8	4800	0.6	FGC3BJ102C++2CL5
1200	600	0.0012	13	9	4	10	5.8	4800	0.6	FGC3BJ122C++2CL5
1200	600	0.0015	13	9	4	10	7.2	4800	0.6	FGC3BJ152C++2CL5
1200	600	0.0018	13	9	4	10	8.6	4800	0.6	FGC3BJ182C++2CL5
1200	600	0.0022	13	9	4	10	10.6	4800	0.6	FGC3BJ222C++2CL5
1200	600	0.0027	13	9	4	10	13.0	4800	0.6	FGC3BJ272C++2CL5
1200	600	0.0033	13	9	4	10	15.8	4800	0.6	FGC3BJ332C++2CL5
1200	600	0.0039	13	11	5	10	18.7	4800	0.6	FGC3BJ392C++2CL5
1200	600	0.0047	13	11	5	10	22.6	4800	0.6	FGC3BJ472C++2CL5
1200	600	0.0056	13	11	5	10	26.9	4800	0.6	FGC3BJ562C++2CL5
1200	600	0.0068	13	11	5	10	32.6	4800	0.6	FGC3BJ682C++2CL5
1200	600	0.0082	13	11	5	10	39.4	4800	0.6	FGC3BJ822C++2CL5
1200	600	0.01	18	11	5	15	33.0	3300	0.6	FGC3BJ103E++2EL5
1200	600	0.012	18	11	5	15	39.6	3300	0.6	FGC3BJ123E++2EL5
1200	600	0.015	18	11	5	15	49.5	3300	0.6	FGC3BJ153E++2EL5
1200	600	0.018	18	11	5	15	59.4	3300	0.6	FGC3BJ183E++2EL5
1200	600	0.02	18	11	5	15	66.0	3300	0.6	FGC3BJ203E++2EL5
1200	600	0.022	18	12	6	15	72.6	3300	0.6	FGC3BJ223E++2EL5
1200	600	0.027	18	13.5	7.5	15	89.1	3300	0.8	FGC3BJ273E++2EL5
1200	600	0.033	18	13.5	7.5	15	108.9	3300	0.8	FGC3BJ333E++2EL5
1200	600	0.039	18	14.5	8.5	15	128.7	3300	0.8	FGC3BJ393E++2EL5
1200	600	0.047	26	16.5	7	22.5	103.4	2200	0.8	FGC3BJ473F++2FL5
1200	600	0.056	26	16.5	7	22.5	123.2	2200	0.8	FGC3BJ563F++2FL5
1200	600	0.068	26	17	8.5	22.5	149.6	2200	0.8	FGC3BJ683F++2FL5
1200	600	0.082	26	19	10	22.5	180.4	2200	0.8	FGC3BJ823F++2FL5
1200	600	0.1	26	19	10	22.5	220.0	2200	0.8	FGC3BJ104F++2FL5
1200	600	0.12	26	20	11	22.5	264.0	2200	0.8	FGC3BJ124F++2FL5
1200	600	0.15	26	22	13	22.5	330.0	2200	0.8	FGC3BJ154F++2FL5
1200	600	0.18	32	20	11	27.5	180.0	1000	0.8	FGC3BJ184G++2GL5
1200	600	0.22	32	22	13	27.5	220.0	1000	0.8	FGC3BJ224G++2GL5
1200	600	0.27	32	25	13	27.5	270.0	1000	0.8	FGC3BJ274G++2GL5
1200	600	0.33	32	28	14	27.5	330.0	1000	0.8	FGC3BJ334G++2GL5
1200	600	0.39	32	33	18	27.5	390.0	1000	0.8	FGC3BJ394G++2GL5
1200	600	0.47	32	33	18	27.5	470.0	1000	0.8	FGC3BJ474G++2GL5
1200	600	0.56	32	37	22	27.5	560.0	1000	0.8	FGC3BJ564G++2GL5
1200	600	0.68	32	37	22	27.5	680.0	1000	0.8	FGC3BJ684G++2GL5
1200	600	0.82	42	40	20	37.5	410.0	500	1.0	FGC3BJ824K++2KL5
1200	600	1	42	40	20	37.5	500.0	500	1.0	FGC3BJ105K++2KL5
1200	600	1.2	42	44	24	37.5	600.0	500	1.0	FGC3BJ125K++2KL5
1200	600	1.5	42	44	24	37.5	750.0	500	1.0	FGC3BJ155K++2KL5
1200	600	1.8	42	45	30	37.5	900.0	500	1.0	FGC3BJ185K++2KL5
1200	600	2.2	42	45	30	37.5	1100.0	500	1.0	FGC3BJ225K++2KL5

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

FGC Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
1600	650	0.0056	18	11	5	15	33.6	6000	0.6	FGC3WJ562E++2EL5
1600	650	0.0068	18	11	5	15	40.8	6000	0.6	FGC3WJ682E++2EL5
1600	650	0.0082	18	11	5	15	49.2	6000	0.6	FGC3WJ822E++2EL5
1600	650	0.01	18	11	5	15	60.0	6000	0.6	FGC3WJ103E++2EL5
1600	650	0.012	18	12	6	15	72.0	6000	0.6	FGC3WJ123E++2EL5
1600	650	0.015	18	12	6	15	90.0	6000	0.6	FGC3WJ153E++2EL5
1600	650	0.018	18	13.5	7.5	15	108.0	6000	0.8	FGC3WJ183E++2EL5
1600	650	0.022	18	13.5	7.5	15	132.0	6000	0.8	FGC3WJ223E++2EL5
1600	650	0.027	18	14.5	8.5	15	162.0	6000	0.8	FGC3WJ273E++2EL5
1600	650	0.033	18	14.5	8.5	15	198.0	6000	0.8	FGC3WJ333E++2EL5
1600	650	0.039	26	16.5	7	22.5	117.0	3000	0.8	FGC3WJ393F++2FL5
1600	650	0.047	26	16.5	7	22.5	141.0	3000	0.8	FGC3WJ473F++2FL5
1600	650	0.056	26	17	8.5	22.5	168.0	3000	0.8	FGC3WJ563F++2FL5
1600	650	0.068	26	19	10	22.5	204.0	3000	0.8	FGC3WJ683F++2FL5
1600	650	0.082	26	19	10	22.5	246.0	3000	0.8	FGC3WJ823F++2FL5
1600	650	0.1	26	20	11	22.5	300.0	3000	0.8	FGC3WJ104F++2FL5
1600	650	0.12	32	22	13	27.5	240.0	2000	0.8	FGC3WJ124G++2GL5
1600	650	0.15	32	25	13	27.5	300.0	2000	0.8	FGC3WJ154G++2GL5
1600	650	0.18	32	28	14	27.5	360.0	2000	0.8	FGC3WJ184G++2GL5
1600	650	0.22	32	33	18	27.5	440.0	2000	0.8	FGC3WJ224G++2GL5
1600	650	0.27	32	33	18	27.5	540.0	2000	0.8	FGC3WJ274G++2GL5
1600	650	0.33	32	33	18	27.5	660.0	2000	0.8	FGC3WJ334G++2GL5
1600	650	0.39	32	37	22	27.5	780.0	2000	0.8	FGC3WJ394G++2GL5
1600	650	0.47	32	37	22	27.5	940.0	2000	0.8	FGC3WJ474G++2GL5
1600	650	0.47	42	32	19	37.5	564.0	1200	1.0	FGC3WJ474K++2KL5
1600	650	0.56	42	40	20	37.5	672.0	1200	1.0	FGC3WJ564K++2KL5
1600	650	0.68	42	40	20	37.5	816.0	1200	1.0	FGC3WJ684K++2KL5
1600	650	0.82	42	44	24	37.5	984.0	1200	1.0	FGC3WJ824K++2KL5
1600	650	1	42	44	24	37.5	1200.0	1200	1.0	FGC3WJ105K++2KL5
1600	650	1.2	42	45	30	37.5	1440.0	1200	1.0	FGC3WJ125K++2KL5

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

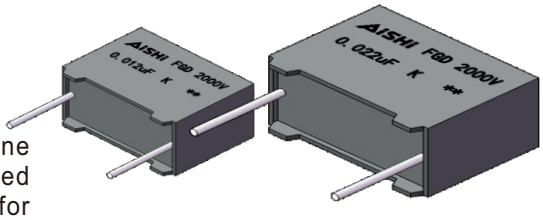
FGC Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
2000	700	0.001	18	11	5	15	9.5	9500	0.6	FGC3DJ102E++2EL5
2000	700	0.0012	18	11	5	15	11.4	9500	0.6	FGC3DJ122E++2EL5
2000	700	0.0015	18	11	5	15	14.3	9500	0.6	FGC3DJ152E++2EL5
2000	700	0.0018	18	11	5	15	17.1	9500	0.6	FGC3DJ182E++2EL5
2000	700	0.0022	18	11	5	15	20.9	9500	0.6	FGC3DJ222E++2EL5
2000	700	0.0027	18	11	5	15	25.7	9500	0.6	FGC3DJ272E++2EL5
2000	700	0.0033	18	11	5	15	31.4	9500	0.6	FGC3DJ332E++2EL5
2000	700	0.0039	18	11	5	15	37.1	9500	0.6	FGC3DJ392E++2EL5
2000	700	0.0047	18	11	5	15	44.7	9500	0.6	FGC3DJ472E++2EL5
2000	700	0.0056	18	12	6	15	53.2	9500	0.6	FGC3DJ562E++2EL5
2000	700	0.0068	18	12	6	15	64.6	9500	0.6	FGC3DJ682E++2EL5
2000	700	0.0082	18	12	6	15	77.9	9500	0.6	FGC3DJ822E++2EL5
2000	700	0.01	18	13.5	7.5	15	95.0	9500	0.8	FGC3DJ103E++2EL5
2000	700	0.012	18	14.5	8.5	15	114.0	9500	0.8	FGC3DJ123E++2EL5
2000	700	0.015	18	14.5	8.5	15	142.5	9500	0.8	FGC3DJ153E++2EL5
2000	700	0.018	18	16	10	15	171.0	9500	0.8	FGC3DJ183E++2EL5
2000	700	0.022	26	16.5	7	22.5	77.0	3500	0.8	FGC3DJ223F++2FL5
2000	700	0.027	26	16.5	7	22.5	94.5	3500	0.8	FGC3DJ273F++2FL5
2000	700	0.033	26	17	8.5	22.5	115.5	3500	0.8	FGC3DJ333F++2FL5
2000	700	0.039	26	19	10	22.5	136.5	3500	0.8	FGC3DJ393F++2FL5
2000	700	0.047	26	19	10	22.5	164.5	3500	0.8	FGC3DJ473F++2FL5
2000	700	0.056	26	20	11	22.5	196.0	3500	0.8	FGC3DJ563F++2FL5
2000	700	0.068	32	22	13	27.5	170.0	2500	0.8	FGC3DJ683G++2GL5
2000	700	0.082	32	25	13	27.5	205.0	2500	0.8	FGC3DJ822G++2GL5
2000	700	0.1	32	28	14	27.5	250.0	2500	0.8	FGC3DJ104G++2GL5
2000	700	0.12	32	33	18	27.5	300.0	2500	0.8	FGC3DJ124G++2GL5
2000	700	0.15	32	33	18	27.5	375.0	2500	0.8	FGC3DJ154G++2GL5
2000	700	0.18	32	37	22	27.5	450.0	2500	0.8	FGC3DJ184G++2GL5
2000	700	0.22	32	37	22	27.5	550.0	2500	0.8	FGC3DJ224G++2GL5
2000	700	0.22	42	32	19	37.5	330.0	1500	1.0	FGC3DJ224K++2KL5
2000	700	0.27	42	40	20	37.5	405.0	1500	1.0	FGC3DJ274K++2KL5
2000	700	0.33	42	40	20	37.5	495.0	1500	1.0	FGC3DJ334K++2KL5
2000	700	0.39	42	44	24	37.5	585.0	1500	1.0	FGC3DJ394K++2KL5
2000	700	0.47	42	44	24	37.5	705.0	1500	1.0	FGC3DJ474K++2KL5
2000	700	0.56	42	45	30	37.5	840.0	1500	1.0	FGC3DJ564K++2KL5
2000	700	0.68	42	45	30	37.5	1020.0	1500	1.0	FGC3DJ684K++2KL5

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

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 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 :≤±2% DF change (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied:1.25 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±2% DF change (△tgδ):≤10 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FGD Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
1000	400	0.0033	18	11	5	15	92.4	28000	0.6	FGD3KJ332E++2EL5
1000	400	0.0039	18	11	5	15	109.2	28000	0.6	FGD3KJ392E++2EL5
1000	400	0.0047	18	11	5	15	131.6	28000	0.6	FGD3KJ472E++2EL5
1000	400	0.0056	18	11	5	15	156.8	28000	0.6	FGD3KJ562E++2EL5
1000	400	0.0068	18	11	5	15	190.4	28000	0.6	FGD3KJ682E++2EL5
1000	400	0.0082	18	11	5	15	229.6	28000	0.6	FGD3KJ822E++2EL5
1000	400	0.01	18	12	6	15	280.0	28000	0.6	FGD3KJ103E++2EL5
1000	400	0.012	18	12	6	15	336.0	28000	0.6	FGD3KJ123E++2EL5
1000	400	0.015	18	13.5	7.5	15	420.0	28000	0.8	FGD3KJ153E++2EL5
1000	400	0.018	18	14.5	8.5	15	504.0	28000	0.8	FGD3KJ183E++2EL5
1000	400	0.022	18	14.5	8.5	15	616.0	28000	0.8	FGD3KJ223E++2EL5
1000	400	0.027	18	16	10	15	756.0	28000	0.8	FGD3KJ273E++2EL5
1000	400	0.033	26	16.5	7	22.5	363.0	11000	0.8	FGD3KJ333F++2FL5
1000	400	0.039	26	17	8.5	22.5	429.0	11000	0.8	FGD3KJ393F++2FL5
1000	400	0.047	26	19	10	22.5	517.0	11000	0.8	FGD3KJ473F++2FL5
1000	400	0.056	26	19	10	22.5	616.0	11000	0.8	FGD3KJ564F++2FL5
1000	400	0.068	26	20	11	22.5	748.0	11000	0.8	FGD3KJ683F++2FL5
1250	450	0.0022	18	11	5	15	66.0	30000	0.6	FGD3RJ222E++2EL5
1250	450	0.0027	18	11	5	15	81.0	30000	0.6	FGD3RJ272E++2EL5
1250	450	0.0033	18	12	6	15	99.0	30000	0.6	FGD3RJ332E++2EL5
1250	450	0.0039	18	12	6	15	117.0	30000	0.6	FGD3RJ392E++2EL5
1250	450	0.0047	18	13.5	7.5	15	141.0	30000	0.8	FGD3RJ472E++2EL5
1250	450	0.0056	18	13.5	7.5	15	168.0	30000	0.8	FGD3RJ562E++2EL5
1250	450	0.0068	18	14.5	8.5	15	204.0	30000	0.8	FGD3RJ682E++2EL5
1250	450	0.0082	18	16	10	15	246.0	30000	0.8	FGD3RJ822E++2EL5
1250	450	0.01	26	16.5	7	22.5	110.0	11000	0.8	FGD3RJ103F++2FL5
1250	450	0.012	26	16.5	7	22.5	132.0	11000	0.8	FGD3RJ123F++2FL5
1250	450	0.015	26	16.5	7	22.5	165.0	11000	0.8	FGD3RJ153F++2FL5
1250	450	0.018	26	16.5	7	22.5	198.0	11000	0.8	FGD3RJ183F++2FL5
1250	450	0.022	26	17	8.5	22.5	242.0	11000	0.8	FGD3RJ223F++2FL5
1250	450	0.027	26	19	10	22.5	297.0	11000	0.8	FGD3RJ273F++2FL5
1250	450	0.033	26	19	10	22.5	363.0	11000	0.8	FGD3RJ333F++2FL5
1250	450	0.039	32	18	9	27.5	429.0	11000	0.8	FGD3RJ393G++2GL5
1250	450	0.047	32	20	11	27.5	517.0	11000	0.8	FGD3RJ473G++2GL5
1250	450	0.056	32	20	11	27.5	616.0	11000	0.8	FGD3RJ563G++2GL5
1250	450	0.068	32	22	13	27.5	748.0	11000	0.8	FGD3RJ683G++2GL5
1250	450	0.082	32	24.5	13	27.5	902.0	11000	0.8	FGD3RJ823G++2GL5

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

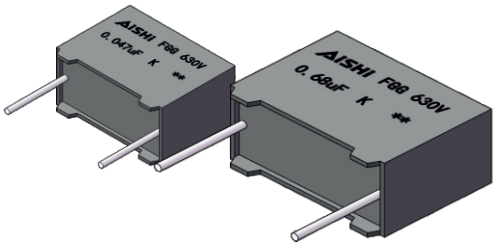
FGD Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
1600	500	0.001	18	11	5	15	34.0	34000	0.6	FGD3WJ102E++2EL5
1600	500	0.0012	18	11	5	15	40.8	34000	0.6	FGD3WJ122E++2EL5
1600	500	0.0015	18	11	5	15	51.0	34000	0.6	FGD3WJ152E++2EL5
1600	500	0.0018	18	11	5	15	61.2	34000	0.6	FGD3WJ182E++2EL5
1600	500	0.0022	18	12	6	15	74.8	34000	0.6	FGD3WJ222E++2EL5
1600	500	0.0027	18	12	6	15	91.8	34000	0.6	FGD3WJ272E++2EL5
1600	500	0.0033	18	13.5	7.5	15	112.2	34000	0.8	FGD3WJ332E++2EL5
1600	500	0.0039	18	13.5	7.5	15	132.6	34000	0.8	FGD3WJ392E++2EL5
1600	500	0.0047	18	14.5	8.5	15	159.8	34000	0.8	FGD3WJ472E++2EL5
1600	500	0.0056	18	16	10	15	190.4	34000	0.8	FGD3WJ562E++2EL5
1600	500	0.0068	18	16	10	15	231.2	34000	0.8	FGD3WJ682E++2EL5
1600	500	0.0082	26	16.5	7	22.5	90.2	11000	0.8	FGD3WJ822F++2FL5
1600	500	0.01	26	16.5	7	22.5	110.0	11000	0.8	FGD3WJ103F++2FL5
1600	500	0.012	26	16.5	7	22.5	132.0	11000	0.8	FGD3WJ123F++2FL5
1600	500	0.015	26	17	8.5	22.5	165.0	11000	0.8	FGD3WJ153F++2FL5
1600	500	0.018	26	17	8.5	22.5	198.0	11000	0.8	FGD3WJ183F++2FL5
1600	500	0.022	26	19	10	22.5	242.0	11000	0.8	FGD3WJ223F++2FL5
1600	500	0.027	32	18	9	27.5	297.0	11000	0.8	FGD3WJ273G++2GL5
1600	500	0.033	32	20	11	27.5	363.0	11000	0.8	FGD3WJ333G++2GL5
1600	500	0.039	32	20	11	27.5	429.0	11000	0.8	FGD3WJ393G++2GL5
1600	500	0.047	32	22	13	27.5	517.0	11000	0.8	FGD3WJ473G++2GL5
1600	500	0.056	32	22	13	27.5	616.0	11000	0.8	FGD3WJ563G++2GL5
2000	550	0.00015	18	11	5	15	8.1	54000	0.6	FGD3DJ151E++2EL5
2000	550	0.00022	18	11	5	15	11.9	54000	0.6	FGD3DJ221E++2EL5
2000	550	0.00033	18	11	5	15	17.8	54000	0.6	FGD3DJ331E++2EL5
2000	550	0.00047	18	11	5	15	25.4	54000	0.6	FGD3DJ471E++2EL5
2000	550	0.00068	18	11	5	15	36.7	54000	0.6	FGD3DJ681E++2EL5
2000	550	0.001	18	12	6	15	54.0	54000	0.6	FGD3DJ102E++2EL5
2000	550	0.0012	18	12	6	15	64.8	54000	0.6	FGD3DJ122E++2EL5
2000	550	0.0015	18	13.5	7.5	15	81.0	54000	0.8	FGD3DJ152E++2EL5
2000	550	0.0018	18	13.5	7.5	15	61.2	34000	0.8	FGD3DJ182E++2EL5
2000	550	0.0022	18	14.5	8.5	15	74.8	34000	0.8	FGD3DJ222E++2EL5
2000	550	0.0027	18	16	10	15	91.8	34000	0.8	FGD3DJ272E++2EL5
2000	550	0.0033	26	16.5	7	22.5	36.3	11000	0.8	FGD3DJ332F++2FL5
2000	550	0.0039	26	16.5	7	22.5	42.9	11000	0.8	FGD3DJ392F++2FL5
2000	550	0.0047	26	16.5	7	22.5	51.7	11000	0.8	FGD3DJ472F++2FL5
2000	550	0.0056	26	16.5	7	22.5	61.6	11000	0.8	FGD3DJ562F++2FL5
2000	550	0.0068	26	17	8.5	22.5	74.8	11000	0.8	FGD3DJ682F++2FL5
2000	550	0.0082	26	17	8.5	22.5	90.2	11000	0.8	FGD3DJ822F++2FL5
2000	550	0.01	26	19	10	22.5	110.0	11000	0.8	FGD3DJ103F++2FL5
2000	550	0.012	26	20	11	22.5	132.0	11000	0.8	FGD3DJ123F++2FL5
2000	550	0.015	32	20	11	27.5	165.0	11000	0.8	FGD3DJ153G++2GL5
2000	550	0.018	32	22	13	27.5	198.0	11000	0.8	FGD3DJ183G++2GL5
2000	550	0.022	32	22	13	27.5	242.0	11000	0.8	FGD3DJ223G++2GL5

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

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.
- Ballasts and compact lamps.

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 ≤ 0.33uF)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 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 (△tg δ): ≤10 X 10^{-3} at 1KHz
	Insulation resistance: ≥ 50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +105°C ±2°C Voltage applied:1.25 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tg δ): ≤10 X 10^{-3} at 1KHz
	Insulation resistance: ≥50% of initial limit

FGG Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
100	50	0.1	10.5	8.5	3.5	7.5	5.0	35	0.5	FGG1KJ104B++2BL5
100	50	0.1	13	9	4	10	5.0	30	0.6	FGG1KJ104C++2CL5
100	50	0.12	10.5	8.5	3.5	7.5	21.6	35	0.5	FGG1KJ124B++2BL5
100	50	0.12	13	9	4	10	21.6	30	0.6	FGG1KJ124C++2CL5
100	50	0.15	10.5	8.5	3.5	7.5	27.0	35	0.5	FGG1KJ154B++2BL5
100	50	0.15	13	9	4	10	15.0	30	0.6	FGG1KJ154C++2CL5
100	50	0.18	10.5	8.5	3.5	7.5	18.0	35	0.5	FGG1KJ184B++2BL5
100	50	0.18	13	9	4	10	18.0	30	0.6	FGG1KJ184C++2CL5
100	50	0.22	10.5	8.5	3.5	7.5	22.0	35	0.5	FGG1KJ224B++2BL5
100	50	0.22	13	9	4	10	22.0	30	0.6	FGG1KJ224C++2CL5
100	50	0.33	10.5	9	4	7.5	33.0	35	0.5	FGG1KJ334B++2BL5
100	50	0.33	13	9	4	10	33.0	30	0.6	FGG1KJ334C++2CL5
100	50	0.47	10.5	9	4	7.5	47.0	35	0.5	FGG1KJ474B++2BL5
100	50	0.47	13	9	4	10	28.2	30	0.6	FGG1KJ474C++2CL5
100	50	0.56	10.5	11	5	7.5	33.6	35	0.5	FGG1KJ564B++2BL5
100	50	0.56	13	9	4	10	33.6	30	0.6	FGG1KJ564C++2CL5
100	50	0.68	10.5	11	5	7.5	34.0	35	0.5	FGG1KJ684B++2BL5
100	50	0.68	13	9	4	10	34.0	30	0.6	FGG1KJ684C++2CL5
100	50	0.82	10.5	12	6	7.5	41.0	35	0.5	FGG1KJ824B++2BL5
100	50	0.82	13	11	5	10	41.0	30	0.6	FGG1KJ824C++2CL5
100	50	1.0	10.5	12	6	7.5	50.0	35	0.5	FGG1KJ105B++2BL5
100	50	1.0	13	11	5	10	50.0	30	0.6	FGG1KJ105C++2CL5
100	50	1.2	13	12	6	10	60.0	30	0.6	FGG1KJ125C++2CL5
100	50	1.5	13	12	6	10	75.0	30	0.6	FGG1KJ155C++2CL5
100	50	1.8	13	13	7	10	90.0	30	0.6	FGG1KJ185C++2CL5
100	50	2.2	18	12	6	15	110.0	20	0.6	FGG1KJ225E++2EL5
100	50	3.3	18	13.5	7.5	15	165.0	20	0.8	FGG1KJ335E++2EL5
100	50	4.7	18	14.5	8.5	15	164.5	20	0.8	FGG1KJ475E++2EL5
100	50	4.7	26	16.5	7	22.5	164.5	10	0.8	FGG1KJ475F++2FL5
100	50	6.8	26	19	10	22.5	238.0	10	0.8	FGG1KJ685F++2FL5
100	50	8.2	26	20	11	22.5	287.0	10	0.8	FGG1KJ825F++2FL5
100	50	10	26	22	12	22.5	350.0	10	0.8	FGG1KJ106F++2FL5
100	50	10	32	20	11	27.5	350.0	5	0.8	FGG1KJ106G++2GL5
100	50	12	32	20	11	27.5	420.0	5	0.8	FGG1KJ126G++2GL5
100	50	15	32	22	13	27.5	525.0	5	0.8	FGG1KJ156G++2GL5
100	50	22	32	25	16	27.5	770.0	5	0.8	FGG1KJ226G++2GL5
100	50	30	32	28	18	27.5	1050.0	5	0.8	FGG1KJ306G++2GL5

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

FGG Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
250	160	0.033	10.5	8.5	3.5	7.5	18.2	110	0.5	FGG2EJ333B++2BL5
250	160	0.033	13	9	4	10	18.2	80	0.6	FGG2EJ333C++2CL5
250	160	0.047	10.5	8.5	3.5	7.5	25.9	110	0.5	FGG2EJ473B++2BL5
250	160	0.047	13	9	4	10	25.9	80	0.6	FGG2EJ473C++2CL5
250	160	0.056	10.5	8.5	3.5	7.5	30.8	110	0.5	FGG2EJ563B++2BL5
250	160	0.056	13	9	4	10	30.8	80	0.6	FGG2EJ563C++2CL5
250	160	0.068	10.5	8.5	3.5	7.5	37.4	110	0.5	FGG2EJ683B++2BL5
250	160	0.068	13	9	4	10	37.4	80	0.6	FGG2EJ683C++2CL5
250	160	0.082	10.5	8.5	3.5	7.5	45.1	110	0.5	FGG2EJ823B++2BL5
250	160	0.082	13	9	4	10	24.6	80	0.6	FGG2EJ823C++2CL5
250	160	0.1	10.5	8.5	3.5	7.5	30.0	110	0.5	FGG2EJ104B++2BL5
250	160	0.1	13	9	4	10	30.0	80	0.6	FGG2EJ104C++2CL5
250	160	0.12	10.5	9	4	7.5	36.0	110	0.5	FGG2EJ124B++2BL5
250	160	0.12	13	9	4	10	36.0	80	0.6	FGG2EJ124C++2CL5
250	160	0.15	10.5	9	4	7.5	45.0	110	0.5	FGG2EJ154B++2BL5
250	160	0.15	13	9	4	10	45.0	80	0.6	FGG2EJ154C++2CL5
250	160	0.18	10.5	11	5	7.5	54.0	110	0.5	FGG2EJ184B++2BL5
250	160	0.18	13	11	5	10	54.0	80	0.6	FGG2EJ184C++2CL5
250	160	0.22	10.5	11	5	7.5	66.0	110	0.5	FGG2EJ224B++2BL5
250	160	0.22	13	11	5	10	66.0	80	0.6	FGG2EJ224C++2CL5
250	160	0.33	10.5	12	6	7.5	41.3	110	0.5	FGG2EJ334B++2BL5
250	160	0.33	13	11	5	10	41.3	80	0.6	FGG2EJ334C++2CL5
250	160	0.39	13	12	6	10	48.8	80	0.6	FGG2EJ394C++2CL5
250	160	0.47	13	12	6	10	58.8	80	0.6	FGG2EJ474C++2CL5
250	160	0.47	18	11	5	15	58.8	45	0.6	FGG2EJ474E++2EL5
250	160	0.68	18	12	6	15	85.0	45	0.6	FGG2EJ684E++2EL5
250	160	1	18	13.5	7.5	15	100.0	45	0.8	FGG2EJ105E++2EL5
250	160	1.2	18	13.5	7.5	15	120.0	45	0.8	FGG2EJ125E++2EL5
250	160	1.5	18	14.5	8.5	15	150.0	45	0.8	FGG2EJ155E++2EL5
250	160	1.5	26	16.5	7	22.5	150.0	20	0.8	FGG2EJ155F++2FL5
250	160	1.8	26	16.5	7	22.5	180.0	20	0.8	FGG2EJ185F++2FL5
250	160	2.2	26	17	8.5	22.5	220.0	20	0.8	FGG2EJ225F++2FL5
250	160	3.3	26	20	11	22.5	132.0	20	0.8	FGG2EJ335F++2FL5
250	160	3.3	32	18	9	27.5	132.0	15	0.8	FGG2EJ335G++2GL5
250	160	4.7	32	20	11	27.5	188.0	15	0.8	FGG2EJ475G++2GL5
250	160	6.8	32	22	13	27.5	272.0	15	0.8	FGG2EJ685G++2GL5
250	160	10	32	25	16	27.5	400.0	15	0.8	FGG2EJ106G++2GL5

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

FGG Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
400	220	0.01	10.5	8.5	3.5	7.5	12.0	180	0.5	FGG2GJ103B++2BL5
400	220	0.01	13	9	4	10	12.0	150	0.6	FGG2GJ103C++2CL5
400	220	0.015	10.5	8.5	3.5	7.5	18.0	180	0.5	FGG2GJ153B++2BL5
400	220	0.015	13	9	4	10	18.0	150	0.6	FGG2GJ153C++2CL5
400	220	0.022	10.5	8.5	3.5	7.5	26.4	180	0.5	FGG2GJ223B++2BL5
400	220	0.022	13	9	4	10	26.4	150	0.6	FGG2GJ223C++2CL5
400	220	0.033	10.5	8.5	3.5	7.5	39.6	180	0.5	FGG2GJ333B++2BL5
400	220	0.033	13	9	4	10	39.6	150	0.6	FGG2GJ333C++2CL5
400	220	0.047	10.5	9	4	7.5	56.4	180	0.5	FGG2GJ473B++2BL5
400	220	0.047	13	9	4	10	37.6	150	0.6	FGG2GJ473C++2CL5
400	220	0.056	10.5	11	5	7.5	44.8	180	0.5	FGG2GJ563B++2BL5
400	220	0.056	13	9	4	10	44.8	150	0.6	FGG2GJ563C++2CL5
400	220	0.068	10.5	11	5	7.5	54.4	180	0.5	FGG2GJ683B++2BL5
400	220	0.068	13	11	5	10	54.4	150	0.6	FGG2GJ683C++2CL5
400	220	0.082	10.5	12	6	7.5	65.6	180	0.5	FGG2GJ823B++2BL5
400	220	0.082	13	11	5	10	65.6	150	0.6	FGG2GJ823C++2CL5
400	220	0.1	10.5	12	6	7.5	80.0	180	0.5	FGG2GJ104B++2BL5
400	220	0.1	13	11	5	10	80.0	150	0.6	FGG2GJ104C++2CL5
400	220	0.12	13	12	6	10	96.0	180	0.6	FGG2GJ124C++2CL5
400	220	0.15	13	12	6	10	120.0	150	0.6	FGG2GJ154C++2CL5
400	220	0.15	18	11	5	15	45.0	65	0.6	FGG2GJ154E++2EL5
400	220	0.18	18	12	6	15	54.0	65	0.6	FGG2GJ184E++2EL5
400	220	0.22	18	12	6	15	66.0	65	0.6	FGG2GJ224E++2EL5
400	220	0.33	18	13.5	7.5	15	99.0	65	0.8	FGG2GJ334E++2EL5
400	220	0.47	18	14.5	7.5	15	141.0	65	0.8	FGG2GJ474E++2EL5
400	220	0.56	18	16	10	15	72.8	65	0.8	FGG2GJ564E++2EL5
400	220	0.68	18	19	11	15	88.4	65	0.8	FGG2GJ684E++2EL5
400	220	0.68	26	16.5	7	22.5	88.4	30	0.8	FGG2GJ684F++2FL5
400	220	0.82	26	17	8.5	22.5	106.6	30	0.8	FGG2GJ824F++2FL5
400	220	1	26	19	10	22.5	130.0	30	0.8	FGG2GJ105F++2FL5
400	220	1.5	26	22	12	22.5	195.0	30	0.8	FGG2GJ155F++2FL5
400	220	1.5	32	20	11	27.5	105.0	25	0.8	FGG2GJ155G++2GL5
400	220	1.8	32	20	11	27.5	126.0	25	0.8	FGG2GJ155G++2GL5
400	220	2.2	32	22	13	27.5	154.0	25	0.8	FGG2GJ225G++2GL5
400	220	3.3	32	25	16	27.5	231.0	25	0.8	FGG2GJ335G++2GL5
400	220	4.7	32	28	16	27.5	329.0	25	0.8	FGG2GJ475G++2GL5
400	220	6.8	32	33	18	27.5	476.0	25	0.8	FGG2GJ685G++2GL5

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

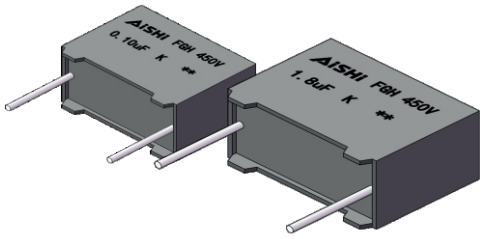
FGG Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
630	250	0.001	10.5	8.5	3.5	7.5	1.5	250	0.5	FGG2LJ102B++2BL5
630	250	0.001	13	9	4	10	1.5	200	0.6	FGG2LJ102C++2CL5
630	250	0.0015	10.5	8.5	3.5	7.5	2.3	250	0.6	FGG2LJ152B++2BL5
630	250	0.0015	13	9	4	10	2.3	200	0.6	FGG2LJ152C++2CL5
630	250	0.0022	10.5	8.5	3.5	7.5	2.2	250	0.6	FGG2LJ222B++2BL5
630	250	0.0022	13	9	4	10	2.2	200	0.6	FGG2LJ222C++2CL5
630	250	0.0033	10.5	8.5	3.5	7.5	3.3	250	0.6	FGG2LJ332B++2BL5
630	250	0.0033	13	9	4	10	3.3	200	0.6	FGG2LJ332C++2CL5
630	250	0.0047	10.5	8.5	3.5	7.5	4.7	250	0.6	FGG2LJ472B++2BL5
630	250	0.0047	13	9	4	10	4.7	200	0.6	FGG2LJ472C++2CL5
630	250	0.0068	10.5	8.5	3.5	7.5	6.8	250	0.8	FGG2LJ682B++2BL5
630	250	0.0068	13	9	4	10	6.8	200	0.8	FGG2LJ682C++2CL5
630	250	0.0082	10.5	8.5	3.5	7.5	8.2	250	0.8	FGG2LJ822B++2BL5
630	250	0.0082	13	9	4	10	8.2	200	0.8	FGG2LJ822C++2CL5
630	250	0.01	10.5	8.5	3.5	7.5	10.0	250	0.8	FGG2LJ103B++2BL5
630	250	0.01	13	9	4	10	4.0	200	0.8	FGG2LJ103C++2CL5
630	250	0.015	10.5	9	4	7.5	6.0	250	0.8	FGG2LJ153B++2BL5
630	250	0.015	13	9	4	10	6.0	200	0.8	FGG2LJ153C++2CL5
630	250	0.022	10.5	11	5	7.5	8.8	250	0.8	FGG2LJ223B++2BL5
630	250	0.022	13	9	4	10	4.0	200	0.8	FGG2LJ223C++2CL5
630	250	0.033	10.5	12	6	7.5	5.9	250	0.8	FGG2LJ333B++2BL5
630	250	0.033	13	11	5	10	5.9	200	0.8	FGG2LJ333C++2CL5
630	250	0.039	10.5	12	6	7.5	7.0	250	0.8	FGG2LJ393B++2BL5
630	250	0.039	13	11	5	10	7.0	200	0.8	FGG2LJ393C++2CL5
630	250	0.047	10.5	12	6	7.5	8.5	250	0.8	FGG2LJ473B++2BL5
630	250	0.047	13	11	5	10	8.5	200	0.8	FGG2LJ473C++2CL5
630	250	0.068	13	12	6	10	6.1	200	1.0	FGG2LJ683C++2CL5
630	250	0.082	18	11	5	15	7.4	90	1.0	FGG2LJ823E++2EL5
630	250	0.1	18	12	6	15	9.0	90	1.0	FGG2LJ104E++2EL5
630	250	0.15	18	13.5	7.5	15	13.5	90	1.0	FGG2LJ154E++2EL5
630	250	0.18	18	14.5	8.5	15	16.2	90	1.0	FGG2LJ184E++2EL5
630	250	0.22	18	16	10	15	19.8	90	1.0	FGG2LJ224E++2EL5
630	250	0.33	18	19	11	15	29.7	90	1.0	FGG2LJ334E++2EL5
630	250	0.47	26	17	8.5	22.5	42.3	35	1.0	FGG2LJ474F++2FL5
630	250	0.56	26	19	10	22.5	50.4	35	1.0	FGG2LJ564F++2FL5
630	250	0.68	26	22	12	22.5	61.2	35	1.0	FGG2LJ684F++2FL5
630	250	0.82	32	20	11	27.5	73.8	35	1.0	FGG2LJ824F++2FL5
630	250	1.0	32	22	13	27.5	90.0	35	1.0	FGG2LJ105F++2FL5

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

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 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 (△tg δ): ≤10 X 10^{-4} at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +105°C ±2°C Voltage applied:1.25 X V_R (d.c.) Temperature: +125°C ±2°C Voltage applied:1.00 X V_R (d.c.) Test duration : 1000 hours Capacitance change : ≤±5% DF change (△tg δ): ≤10 X 10^{-4} at 1KHz Insulation resistance : ≥50% of initial limit

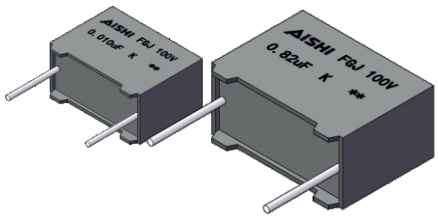
FGH Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
450	220	0.1	13	11	5	10	20.0	200	0.6	FGH2WK104C++2CL5
450	220	0.12	13	11	5	10	24.0	200	0.6	FGH2WK124C++2CL5
450	220	0.15	13	11	5	10	30.0	200	0.6	FGH2WK154C++2CL5
450	220	0.18	13	11	5	10	36.0	200	0.6	FGH2WK184C++2CL5
450	220	0.2	13	11	5	10	40.0	200	0.6	FGH2WK204C++2CL5
450	220	0.22	13	11	5	10	44.0	200	0.6	FGH2WK224C++2CL5
450	220	0.27	13	11	5	10	54.0	200	0.6	FGH2WK274C++2CL5
450	220	0.30	13	12	6	10	60.0	200	0.6	FGH2WK304C++2CL5
450	220	0.33	13	12	6	10	66.0	200	0.6	FGH2WK334C++2CL5
450	220	0.39	13	12	6	10	78.0	200	0.6	FGH2WK394C++2CL5
450	220	0.39	13	13	7	10	78.0	200	0.6	FGH2WK394C++2CL5
450	220	0.47	13	12	6	10	94.0	200	0.6	FGH2WK474C++2CL5
450	220	0.47	13	13	7	10	94.0	200	0.6	FGH2WK474C++2CL5
450	220	0.56	13	14	8	10	112.0	200	0.6	FGH2WK564C++2CL5
450	220	0.68	13	16	8	10	136.0	200	0.6	FGH2WK684C++2CL5
450	220	0.82	13	18	9	10	164.0	200	0.6	FGH2WK824C++2CL5
450	220	1.0	13	18	9	10	200.0	200	0.6	FGH2WK105C++2CL5
450	220	1.0	13	19	10	10	200.0	200	0.6	FGH2WK105C++2CL5
450	220	0.1	18	11	5	15	12.0	120	0.6	FGH2WK104E++2EL5
450	220	0.12	18	11	5	15	14.4	120	0.6	FGH2WK124E++2EL5
450	220	0.15	18	11	5	15	18.0	120	0.6	FGH2WK154E++2EL5
450	220	0.18	18	11	5	15	21.6	120	0.6	FGH2WK184E++2EL5
450	220	0.20	18	11	5	15	24.0	120	0.6	FGH2WK204E++2EL5
450	220	0.22	18	11	5	15	26.4	120	0.6	FGH2WK224E++2EL5
450	220	0.33	18	11	5	15	39.6	120	0.6	FGH2WK334E++2EL5
450	220	0.39	18	11	5	15	46.8	120	0.6	FGH2WK394E++2EL5
450	220	0.47	18	12	6	15	56.4	120	0.6	FGH2WK474E++2EL5
450	220	0.56	18	12	6	15	67.2	120	0.6	FGH2WK564E++2EL5
450	220	0.68	18	12	6	15	81.6	120	0.6	FGH2WK684E++2EL5
450	220	0.82	18	13	7	15	98.4	120	0.8	FGH2WK824E++2EL5
450	220	1.0	18	13	7	15	120.0	120	0.8	FGH2WK105E++2EL5
450	220	1.2	18	14.5	8.5	15	144.0	120	0.8	FGH2WK125E++2EL5
450	220	1.5	18	16	8	15	180.0	120	0.8	FGH2WK155E++2EL5
450	220	1.5	18	16	10	15	180.0	120	0.8	FGH2WK155E++2EL5
450	220	1.8	18	18	9	15	216.0	120	0.8	FGH2WK185E++2EL5
450	220	1.8	18	16	10	15	216.0	120	0.8	FGH2WK185E++2EL5
450	220	2.0	18	18	9	15	240.0	120	0.8	FGH2WK205E++2EL5
450	220	2.0	18	16	10	15	240.0	120	0.8	FGH2WK205E++2EL5
450	220	2.2	18	18	10	15	264.0	120	0.8	FGH2WK225E++2EL5
450	220	2.5	18	19	11	15	300.0	120	0.8	FGH2WK255E++2EL5
450	220	3.3	18	22	12.5	15	396.0	120	0.8	FGH2WK335E++2EL5
450	220	1.5	26	16.5	7	22.5	120.0	80	0.8	FGH2WK155F++2FL5
450	220	1.8	26	16.5	7	22.5	144.0	80	0.8	FGH2WK185F++2FL5
450	220	2.2	26	17	8.5	22.5	176.0	80	0.8	FGH2WK225F++2FL5
450	220	2.5	26	17	8.5	22.5	200.0	80	0.8	FGH2WK255F++2FL5
450	220	3.3	26	19	10	22.5	264.0	80	0.8	FGH2WK335F++2FL5

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

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 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 (△tg δ): ≤10 X 10^{-3} at 1KHz Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance: Temperature: +105°C ±2°C Voltage applied:1.25 X V_R (d.c.) Test duration : 1000 hours Capacitance change : ≤±10% DF change (△tg δ): ≤10 X 10^{-3} at 1KHz Insulation resistance: ≥50% of initial limit

FGJ Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
63	25	0.01	7.3	7.2	3.2	5.0	0.5	45	0.5	FGJ1JJ103A++VAAT
63	25	0.012	7.3	7.2	3.2	5.0	0.5	45	0.5	FGJ1JJ123A++VAAT
63	25	0.015	7.3	7.2	3.2	5.0	0.7	45	0.5	FGJ1JJ153A++VAAT
63	25	0.018	7.3	7.2	3.2	5.0	0.8	45	0.5	FGJ1JJ183A++VAAT
63	25	0.022	7.3	7.2	3.2	5.0	1.0	45	0.5	FGJ1JJ223A++VAAT
63	25	0.027	7.3	7.2	3.2	5.0	1.2	45	0.5	FGJ1JJ273A++VAAT
63	25	0.033	7.3	7.2	3.2	5.0	1.5	45	0.5	FGJ1JJ333A++VAAT
63	25	0.039	7.3	7.2	3.2	5.0	1.8	45	0.5	FGJ1JJ393A++VAAT
63	25	0.047	7.3	7.2	3.2	5.0	2.1	45	0.5	FGJ1JJ473A++VAAT
63	25	0.056	7.3	7.2	3.2	5.0	2.5	45	0.5	FGJ1JJ563A++VAAT
63	25	0.068	7.3	7.2	3.2	5.0	3.1	45	0.5	FGJ1JJ683A++VAAT
63	25	0.082	7.3	7.2	3.2	5.0	3.7	45	0.5	FGJ1JJ823A++VAAT
63	25	0.1	7.3	7.2	3.2	5.0	4.5	45	0.5	FGJ1JJ104A++VAAT
63	25	0.12	7.3	7.6	3.6	5.0	5.4	45	0.5	FGJ1JJ124A++VAAT
63	25	0.15	7.3	7.6	3.6	5.0	6.8	45	0.5	FGJ1JJ154A++VAAT
63	25	0.18	7.3	7.6	3.6	5.0	8.1	45	0.5	FGJ1JJ184A++VAAT
63	25	0.22	7.3	7.6	3.6	5.0	9.9	45	0.5	FGJ1JJ224A++VAAT
63	25	0.27	7.3	9.6	4.6	5.0	12.2	45	0.5	FGJ1JJ274A++VAAT
63	25	0.33	7.3	9.6	4.6	5.0	14.9	45	0.5	FGJ1JJ334A++VAAT
63	25	0.39	7.3	9.6	4.6	5.0	17.6	45	0.5	FGJ1JJ394A++VAAT
63	25	0.47	7.3	10.2	5.2	5.0	21.2	45	0.5	FGJ1JJ474A++VAAT
63	25	0.56	7.3	10.2	5.2	5.0	25.2	45	0.5	FGJ1JJ564A++VAAT
63	25	0.68	7.3	11.5	5.5	5.0	30.6	45	0.5	FGJ1JJ684A++VAAT
63	25	0.82	7.3	11.5	5.5	5.0	36.9	45	0.5	FGJ1JJ824A++VAAT
63	25	1	7.3	12.0	6.5	5.0	45.0	45	0.5	FGJ1JJ105A++VAAT

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

FGJ Series

Technical data

Vdc	Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
100	25	0.01	7.3	7.2	3.2	5.0	0.5	45	0.5	FGJ1KJ103A++VAAT
100	25	0.012	7.3	7.2	3.2	5.0	0.5	45	0.5	FGJ1KJ123A++VAAT
100	25	0.015	7.3	7.2	3.2	5.0	0.7	45	0.5	FGJ1KJ153A++VAAT
100	25	0.018	7.3	7.2	3.2	5.0	0.8	45	0.5	FGJ1KJ183A++VAAT
100	25	0.022	7.3	7.2	3.2	5.0	1.0	45	0.5	FGJ1KJ223A++VAAT
100	25	0.027	7.3	7.2	3.2	5.0	1.2	45	0.5	FGJ1KJ273A++VAAT
100	25	0.033	7.3	7.2	3.2	5.0	1.5	45	0.5	FGJ1KJ333A++VAAT
100	25	0.039	7.3	7.2	3.2	5.0	1.8	45	0.5	FGJ1KJ393A++VAAT
100	25	0.047	7.3	7.2	3.2	5.0	2.1	45	0.5	FGJ1KJ473A++VAAT
100	25	0.056	7.3	7.2	3.2	5.0	2.5	45	0.5	FGJ1KJ563A++VAAT
100	25	0.068	7.3	7.2	3.2	5.0	3.1	45	0.5	FGJ1KJ683A++VAAT
100	25	0.082	7.3	7.2	3.2	5.0	3.7	45	0.5	FGJ1KJ823A++VAAT
100	25	0.1	7.3	7.2	3.2	5.0	4.5	45	0.5	FGJ1KJ104A++VAAT
100	25	0.12	7.3	7.6	3.6	5.0	5.4	45	0.5	FGJ1KJ124A++VAAT
100	25	0.15	7.3	7.6	3.6	5.0	6.8	45	0.5	FGJ1KJ154A++VAAT
100	25	0.18	7.3	7.6	3.6	5.0	8.1	45	0.5	FGJ1KJ184A++VAAT
100	25	0.22	7.3	7.6	3.6	5.0	9.9	45	0.5	FGJ1KJ224A++VAAT
100	25	0.27	7.3	9.6	4.6	5.0	12.2	45	0.5	FGJ1KJ274A++VAAT
100	25	0.33	7.3	9.6	4.6	5.0	14.9	45	0.5	FGJ1KJ334A++VAAT
100	25	0.39	7.3	9.6	4.6	5.0	17.6	45	0.5	FGJ1KJ394A++VAAT
100	25	0.47	7.3	10.2	5.2	5.0	21.2	45	0.5	FGJ1KJ474A++VAAT
100	25	0.56	7.3	10.2	5.2	5.0	25.2	45	0.5	FGJ1KJ564A++VAAT
100	25	0.68	7.3	11.5	5.5	5.0	30.6	45	0.5	FGJ1KJ684A++VAAT
100	25	0.82	7.3	11.5	5.5	5.0	36.9	45	0.5	FGJ1KJ824A++VAAT
100	25	1	7.3	12.0	6.5	5.0	45.0	45	0.5	FGJ1KJ105A++VAAT

* 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 $Pj=Rs*Irms^2$

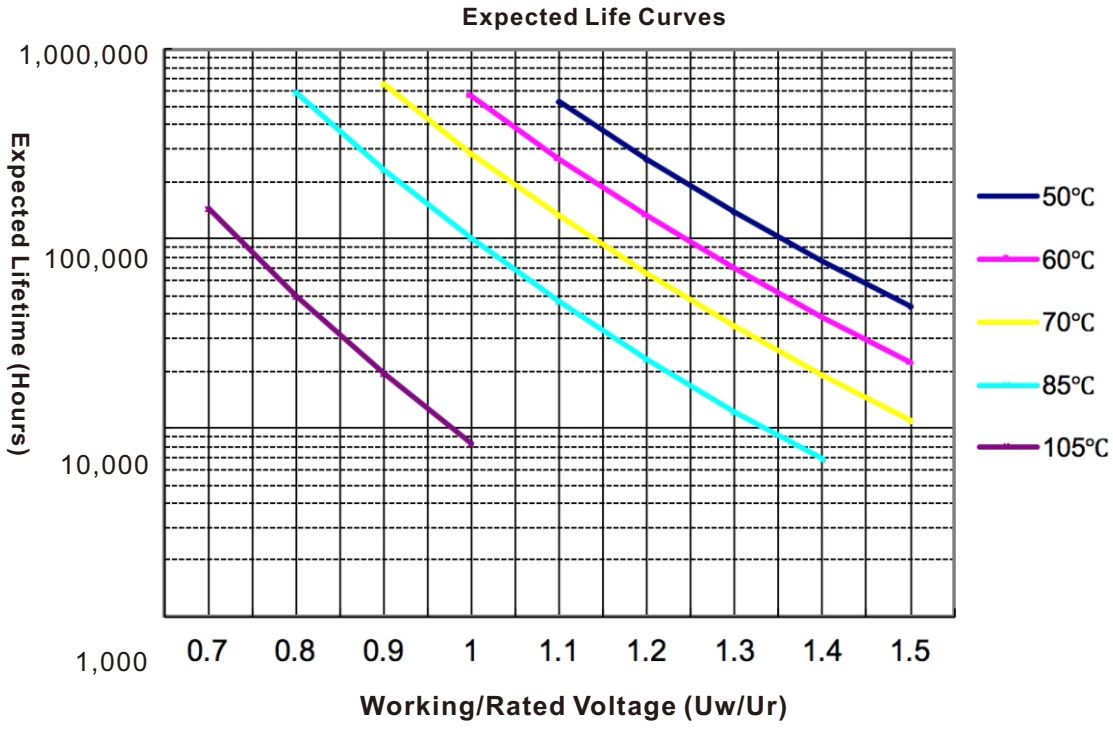
Pd: Dielectric losses

$$Pd= Xc*Irms^2*\tan\delta= Irms^2 / (2*\pi*f*C)*\tan\delta$$

T_{hs}: Hot spot temperature within the capacitor

$$T_{hs} = Ta + (Pj+ Pd)*Rth$$

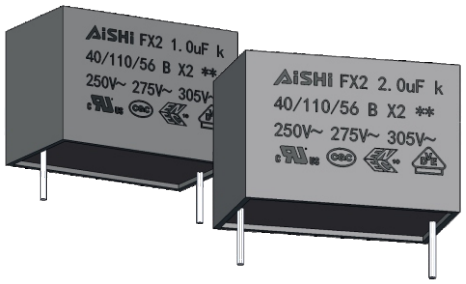
Design life: 100,000 hours at Un @ Hot-Spot temperature ≤+85°C



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.

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

- Used in electromagnetic interference suppression in across-the-line applications which required X2 safety classification.
- Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

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 s (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 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
	C_R≤1 μF, Capacitance change : ≤±5%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R>1 μF, Capacitance change : ≤±5%, DF change (△tgδ):≤50 X 10^{-4} 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
	C_R≤1 μF, Capacitance change : ≤±10%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R>1 μF, Capacitance change : ≤±10%, DF change (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FX2 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
305	630	0.010	10.0	12.0	6.0	7.5	6.0	600	0.6	FX230K103B++2BL5
305	630	0.022	10.0	12.0	6.0	7.5	13.2	600	0.6	FX230K223B++2BL5
305	630	0.033	10.0	12.0	6.0	7.5	19.8	600	0.6	FX230K333B++2BL5
305	630	0.047	10.0	12.0	6.0	7.5	28.2	600	0.6	FX230K473B++2BL5
305	630	0.068	10.0	13.0	7.0	7.5	40.8	600	0.6	FX230K683B++2BL5
305	630	0.100	10.0	14.0	8.0	7.5	60.0	600	0.6	FX230K104B++2BL5
305	630	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FX230K103C++2CL5
305	630	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FX230K223C++2CL5
305	630	0.033	13.0	11.0	5.0	10.0	16.5	500	0.6	FX230K333C++2CL5
305	630	0.047	13.0	11.0	5.0	10.0	23.5	500	0.6	FX230K473C++2CL5
305	630	0.068	13.0	11.0	5.0	10.0	34.0	500	0.6	FX230K683C++2CL5
305	630	0.082	13.0	11.0	5.0	10.0	41.0	500	0.6	FX230K823C++2CL5
305	630	0.082	13.0	12.0	6.0	10.0	41.0	500	0.6	FX230K823C++2CL5
305	630	0.10	13.0	12.0	6.0	10.0	50.0	500	0.6	FX230K104C++2CL5
305	630	0.15	13.0	13.0	7.0	10.0	75.0	500	0.6	FX230K154C++2CL5
305	630	0.15	13.0	14.0	8.0	10.0	75.0	500	0.6	FX230K154C++2CL5
305	630	0.22	13.0	14.0	8.0	10.0	110.0	500	0.6	FX230K224C++2CL5
305	630	0.27	13.0	16.0	8.0	10.0	135.0	500	0.6	FX230K274C++2CL5
305	630	0.33	13.0	16.0	9.0	10.0	165.0	500	0.6	FX230K334C++2CL5
305	630	0.15	15.0	12.5	7.0	12.5	75.0	500	0.6	FX230K154D++2DL5
305	630	0.22	15.0	12.5	7.0	12.5	110.0	500	0.6	FX230K224D++2DL5
305	630	0.33	15.0	14.0	8.5	12.5	165.0	500	0.6	FX230K334D++2DL5
305	630	0.47	15.0	16.0	10.0	12.5	235.0	500	0.6	FX230K474D++2DL5
305	630	0.047	18.0	11.0	5.0	15.0	18.8	400	0.6	FX230K473E++2EL5
305	630	0.068	18.0	11.0	5.0	15.0	27.2	400	0.6	FX230K683E++2EL5
305	630	0.082	18.0	11.0	5.0	15.0	32.8	400	0.6	FX230K823E++2EL5
305	630	0.10	18.0	11.0	5.0	15.0	40.0	400	0.6	FX230K104E++2EL5
305	630	0.10	18.0	12.0	6.0	15.0	40.0	400	0.6	FX230K104E++2EL5
305	630	0.15	18.0	12.0	6.0	15.0	60.0	400	0.6	FX230K154E++2EL5
305	630	0.22	18.0	12.0	6.0	15.0	88.0	400	0.6	FX230K224E++2EL5
305	630	0.22	18.0	13.5	7.5	15.0	88.0	400	0.8	FX230K224E++2EL5
305	630	0.27	18.0	13.5	7.5	15.0	108.0	400	0.8	FX230K274E++2EL5
305	630	0.27	18.0	14.5	8.5	15.0	108.0	400	0.8	FX230K274E++2EL5
305	630	0.33	18.0	14.5	8.5	15.0	132.0	400	0.8	FX230K334E++2EL5
305	630	0.33	18.0	16.0	10.0	15.0	132.0	400	0.8	FX230K334E++2EL5
305	630	0.47	18.0	16.0	10.0	15.0	188.0	400	0.8	FX230K474E++2EL5
305	630	0.47	18.0	19.0	11.0	15.0	188.0	400	0.8	FX230K474E++2EL5
305	630	0.56	18.0	18.0	10.0	15.0	224.0	400	0.8	FX230K564E++2EL5
305	630	0.68	18.0	19.0	11.0	15.0	272.0	400	0.8	FX230K684E++2EL5
305	630	0.82	18.0	19.0	11.0	15.0	328.0	400	0.8	FX230K824E++2EL5
305	630	1.00	18.0	22.0	12.5	15.0	400.0	400	0.8	FX230K105E++2EL5

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

FX2 series

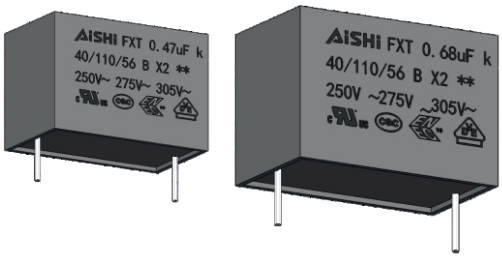
Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
305	630	0.22	26.0	16.5	7.0	22.5	44	200	0.8	FX230K224F++2FL5
305	630	0.27	26.0	16.5	7.0	22.5	54	200	0.8	FX230K274F++2FL5
305	630	0.33	26.0	17.0	8.5	22.5	66	200	0.8	FX230K334F++2FL5
305	630	0.47	26.0	17.0	8.5	22.5	94	200	0.8	FX230K474F++2FL5
305	630	0.47	26.0	19.0	10.0	22.5	94	200	0.8	FX230K474F++2FL5
305	630	0.56	26.0	17.0	8.5	22.5	112	200	0.8	FX230K564F++2FL5
305	630	0.56	26.0	19.0	10.0	22.5	112	200	0.8	FX230K564F++2FL5
305	630	0.68	26.0	17.0	8.5	22.5	136	200	0.8	FX230K684F++2FL5
305	630	0.68	26.0	19.0	10.0	22.5	136	200	0.8	FX230K684F++2FL5
305	630	0.82	26.0	19.0	10.0	22.5	164	200	0.8	FX230K824F++2FL5
305	630	1.00	26.0	19.0	10.0	22.5	200	200	0.8	FX230K105F++2FL5
305	630	1.00	26.0	20.0	11.0	22.5	200	200	0.8	FX230K105F++2FL5
305	630	1.20	26.0	23.0	13.0	22.5	240	200	0.8	FX230K125F++2FL5
305	630	1.50	26.0	23.0	13.0	22.5	300	200	0.8	FX230K155F++2FL5
305	630	0.68	32.0	18.0	9.0	27.5	102	150	0.8	FX230K684G++2GL5
305	630	0.82	32.0	18.0	9.0	27.5	123	150	0.8	FX230K824G++2GL5
305	630	1.00	32.0	20.0	11.0	27.5	150	150	0.8	FX230K105G++2GL5
305	630	1.20	32.0	22.0	13.0	27.5	180	150	0.8	FX230K125G++2GL5
305	630	1.50	32.0	24.5	13.0	27.5	225	150	0.8	FX230K155G++2GL5
305	630	2.20	32.0	28.0	14.0	27.5	330	150	0.8	FX230K225G++2GL5
305	630	3.30	32.0	33.0	18.0	27.5	495	150	0.8	FX230K335G++2GL5
305	630	4.70	32.0	33.0	18.0	27.5	705	150	0.8	FX230M475G++2GL5
305	630	4.70	32.0	37.0	22.0	27.5	705	150	0.8	FX230K475G++2GL5
305	630	4.70	42.5	32.0	19.0	37.5	470	100	1.0	FX230K475K++2KL5
305	630	6.80	42.5	40.0	20.0	37.5	680	100	1.0	FX230M685K++2KL5
305	630	6.80	42.5	44.0	24.0	37.5	680	100	1.0	FX230K685K++2KL5
305	630	10.0	42.5	45.0	30.0	37.5	1000	100	1.0	FX230K106K++2KL5
305	630	12.0	42.5	45.0	30.0	37.5	1200	100	1.0	FX230K126K++2KL5
305	630	12.0	57.5	45.0	30.0	52.5	960	80	1.2	FX230K126M++2ML5
305	630	15.0	42.5	45.0	30.0	37.5	1500	100	1.0	FX230K156K++2KL5
305	630	15.0	57.5	45.0	30.0	52.5	900	60	1.2	FX230K156M++2ML5
305	630	18.0	42.5	45.0	30.0	37.5	1800	100	1.0	FX230K186K++2KL5
305	630	18.0	57.5	45.0	30.0	52.5	1080	60	1.2	FX230K186M++2ML5
305	630	20.0	42.5	45.0	30.0	37.5	2000	100	1.0	FX230K206K++2KL5
305	630	20.0	57.5	45.0	30.0	52.5	1200	60	1.2	FX230K206M++2ML5
305	630	22.0	42.5	45.0	30.0	37.5	2200	100	1.0	FX230K226K++2KL5
305	630	22.0	57.5	45.0	30.0	52.5	1320	60	1.2	FX230K226M++2ML5
305	630	25.0	57.5	45.0	30.0	52.5	1500	60	1.2	FX230K256M++2ML5
305	630	30.0	57.5	45.0	30.0	52.5	1800	60	1.2	FX230M306M++2ML5
305	630	30.0	57.5	50.0	35.0	52.5	1800	60	1.2	FX230K306M++2ML5
305	630	33.0	57.5	50.0	35.0	52.5	1980	60	1.2	FX230K336M++2ML5
305	630	39.0	57.5	50.0	35.0	52.5	2340	60	1.2	FX230M396M++2ML5
305	630	40.0	57.5	50.0	35.0	52.5	2400	60	1.2	FX230M406M++2ML5
305	630	45.0	57.5	60.0	45.0	52.5	2700	60	1.2	FX230K456M++2ML5

* 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

- Used in electromagnetic interference suppression in across-the-line applications which required X2 safety classification.
- Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

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 s (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 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
	C_R≤1 μF, Capacitance change : ≤±5%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R>1 μF, Capacitance change : ≤±5%, DF change (△tgδ):≤50 X 10^{-4} 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
	C_R≤1 μF, Capacitance change : ≤±10%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R>1 μF, Capacitance change : ≤±10%, DF change (△tgδ):≤50 X 10^{-4} 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%

FXT series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
305	630	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FXT30K103C++2CL5
305	630	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FXT30K223C++2CL5
305	630	0.033	13.0	11.0	5.0	10.0	16.5	500	0.6	FXT30K333C++2CL5
305	630	0.047	13.0	12.0	6.0	10.0	23.5	500	0.6	FXT30K473C++2CL5
305	630	0.068	13.0	12.0	6.0	10.0	34.0	500	0.6	FXT30K683C++2CL5
305	630	0.082	13.0	12.0	6.0	10.0	41.0	500	0.6	FXT30K823C++2CL5
305	630	0.100	13.0	12.0	6.0	10.0	50.0	500	0.6	FXT30K104C++2CL5
305	630	0.150	13.0	14.0	8.0	10.0	75.0	500	0.6	FXT30K154C++2CL5
305	630	0.047	18.0	12.0	6.0	15.0	18.8	400	0.6	FXT30K473E++2EL5
305	630	0.068	18.0	12.0	6.0	15.0	27.2	400	0.6	FXT30K683E++2EL5
305	630	0.082	18.0	12.0	6.0	15.0	32.8	400	0.6	FXT30K823E++2EL5
305	630	0.10	18.0	12.0	6.0	15.0	40.0	400	0.6	FXT30K104E++2EL5
305	630	0.15	18.0	12.0	6.0	15.0	60.0	400	0.6	FXT30K154E++2EL5
305	630	0.15	18.0	13.0	7.0	15.0	60.0	400	0.6	FXT30K154E++2EL5
305	630	0.22	18.0	14.0	8.0	15.0	88.0	400	0.8	FXT30K224E++2EL5
305	630	0.27	18.0	14.5	8.5	15.0	108.0	400	0.8	FXT30K274E++2EL5
305	630	0.33	18.0	16.0	10.0	15.0	132.0	400	0.8	FXT30K334E++2EL5
305	630	0.47	18.0	19.0	11.0	15.0	188.0	400	0.8	FXT30K474E++2EL5
305	630	0.56	18.0	18.0	11.0	15.0	224.0	400	0.8	FXT30K564E++2EL5
305	630	0.68	18.0	22.0	12.5	15.0	272.0	400	0.8	FXT30K684E++2EL5
305	630	0.82	18.0	22.0	12.5	15.0	328.0	400	0.8	FXT30K824E++2EL5
305	630	0.22	26.0	16.5	7.0	22.5	44.0	200	0.8	FXT30K224F++2FL5
305	630	0.27	26.0	16.5	7.0	22.5	54.0	200	0.8	FXT30K274F++2FL5
305	630	0.33	26.0	17.0	8.5	22.5	66.0	200	0.8	FXT30K334F++2FL5
305	630	0.47	26.0	19.0	10.0	22.5	94.0	200	0.8	FXT30K474F++2FL5
305	630	0.56	26.0	19.0	10.0	22.5	112.0	200	0.8	FXT30K564F++2FL5
305	630	0.68	26.0	20.0	11.0	22.5	136.0	200	0.8	FXT30K684F++2FL5
305	630	0.82	26.0	20.0	11.0	22.5	164.0	200	0.8	FXT30K824F++2FL5
305	630	1.00	26.0	22.0	12.0	22.5	200.0	200	0.8	FXT30K105F++2FL5
305	630	1.20	26.0	23.0	13.0	22.5	240.0	200	0.8	FXT30K125F++2FL5
305	630	1.50	26.0	24.0	14.0	22.5	300.0	200	0.8	FXT30K155F++2FL5
305	630	1.50	26.0	25.0	15.0	22.5	300.0	200	0.8	FXT30K155F++2FL5

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

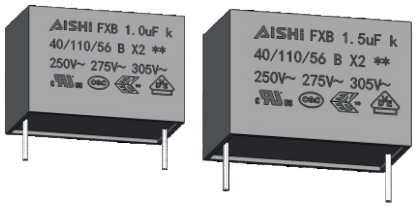
FXT series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
305	630	1.0	32.0	20.0	11.0	27.5	150	150	0.8	FXT30K105G++2GL5
305	630	1.2	32.0	22.0	13.0	27.5	180	150	0.8	FXT30K125G++2GL5
305	630	1.5	32.0	24.5	13.0	27.5	225	150	0.8	FXT30K155G++2GL5
305	630	2.2	32.0	28.0	14.0	27.5	330	150	0.8	FXT30K225G++2GL5
305	630	3.3	32.0	33.0	18.0	27.5	495	150	0.8	FXT30K335G++2GL5
305	630	4.7	32.0	37.0	22.0	27.5	705	150	0.8	FXT30K475G++2GL5
305	630	4.7	42.5	32.0	19.0	37.5	470	100	1.0	FXT30K475K++2KL5
305	630	6.8	42.5	44.0	24.0	37.5	680	100	1.0	FXT30K685K++2KL5
305	630	10.0	42.5	45.0	30.0	37.5	1000	100	1.0	FXT30K106K++2KL5
305	630	12.0	42.5	45.0	30.0	37.5	1200	100	1.0	FXT30K126K++2KL5
305	630	12.0	57.5	45.0	30.0	52.5	1200	100	1.2	FXT30K126K++2KL5
305	630	15.0	42.5	45.0	30.0	37.5	1500	100	1.0	FXT30K156K++2KL5
305	630	15.0	57.5	45.0	30.0	52.5	1500	100	1.2	FXT30K156M++2ML5
305	630	18.0	57.5	45.0	30.0	52.5	1800	100	1.2	FXT30K186M++2ML5
305	630	20.0	57.5	45.0	30.0	52.5	2000	100	1.2	FXT30K206M++2ML5
305	630	22.0	57.5	45.0	30.0	52.5	2200	100	1.2	FXT30K226M++2ML5
305	630	25.0	57.5	45.0	30.0	52.5	2500	100	1.2	FXT30K256M++2ML5
305	630	30.0	57.5	45.0	30.0	52.5	3000	100	1.2	FXT30K306M++2ML5
305	630	30.0	57.5	50.0	35.0	52.5	3000	100	1.2	FXT30K306M++2ML5
305	630	33.0	57.5	50.0	35.0	52.5	3300	100	1.2	FXT30K336M++2ML5
305	630	39.0	57.5	50.0	35.0	52.5	3900	100	1.2	FXT30K396M++2ML5
305	630	40.0	57.5	50.0	35.0	52.5	4000	100	1.2	FXT30K406M++2ML5
305	630	45.0	57.5	60.0	45.0	52.5	4500	100	1.2	FXT30K456M++2ML5

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

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

- Energy meter, capacitive power supplies.
- Specifically designed for applications in serial with the 110Vac ~ 240Vac main.

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 s (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 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
	$C_R \leq$ 1μF, Capacitance change : ≤±5%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	$C_R >$ 1μF, Capacitance change : ≤±5%, DF change (△tgδ):≤50 X 10^{-4} 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
	C_R ≤1μF, Capacitance change : ≤±10%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R >1μF, Capacitance change : ≤±10%, DF change (△tgδ):≤50 X 10^{-4} 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%

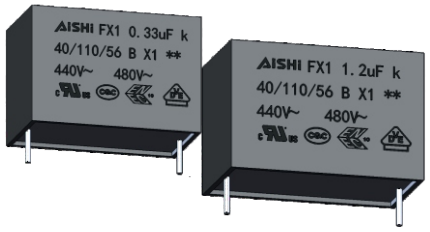
FXB series

Technical data

Vac	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
	Value	W	H	T	P	Current		Wire	Number
	μF	mm	mm	mm	mm	A	V/us	mm	
305	0.10	18.0	13.5	7.5	15.0	40	400	0.8	FXB30K104E++2EL5
305	0.15	18.0	14.5	8.5	15.0	60	400	0.8	FXB30K154E++2EL5
305	0.22	18.0	16.0	10.0	15.0	88	400	0.8	FXB30K224E++2EL5
305	0.33	18.0	19.0	11.0	15.0	132	400	0.8	FXB30K334E++2EL5
305	0.47	26.0	20.0	11.0	22.5	94	200	0.8	FXB30K474F++2FL5
305	0.56	26.0	20.0	11.0	22.5	112	200	0.8	FXB30K564F++2FL5
305	0.68	26.0	22.0	12.0	22.5	136	200	0.8	FXB30K684F++2FL5
305	0.82	26.0	22.0	12.0	22.5	164	200	0.8	FXB30K824F++2FL5
305	1.00	26.0	23.0	13.0	22.5	200	200	0.8	FXB30K105F++2FL5
305	1.00	32.0	22.0	13.0	27.5	100	100	0.8	FXB30K105G++2GL5
305	1.20	32.0	28.0	14.0	27.5	120	100	0.8	FXB30K125G++2GL5
305	1.50	32.0	28.0	14.0	27.5	150	100	0.8	FXB30K155G++2GL5
305	1.80	32.0	33.0	18.0	27.5	180	100	0.8	FXB30K185G++2GL5
305	2.00	32.0	33.0	18.0	27.5	200	100	0.8	FXB30K205G++2GL5
305	2.20	32.0	33.0	18.0	27.5	220	100	0.8	FXB30K225G++2GL5

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

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

- Used in electromagnetic interference suppression in across-the-line applications which required X1 safety classification. Failure of the capacitor would not lead to danger of electric shock.
- Used in inverter of wind power, UPS systems.

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 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_R VDC for 60s or 3400VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	2U_R +1500 Vac 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
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 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
	C_R≤1μF , Capacitance change : ≤±5%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R>1μF , Capacitance change : ≤±5%, DF change (△tgδ):≤50 X 10^{-4} 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
	C_R≤1μF , Capacitance change : ≤±10%, DF change (△tgδ):≤80 X 10^{-4} at 1KHz
	C_R>1μF , Capacitance change : ≤±10%, DF change (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FX1 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
350	760	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FX135K103C++2CL5
350	760	0.012	13.0	11.0	5.0	10.0	6.0	500	0.6	FX135K123C++2CL5
350	760	0.015	13.0	11.0	5.0	10.0	7.5	500	0.6	FX135K153C++2CL5
350	760	0.018	13.0	11.0	5.0	10.0	9.0	500	0.6	FX135K183C++2CL5
350	760	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FX135K223C++2CL5
350	760	0.027	13.0	11.0	5.0	10.0	13.5	500	0.6	FX135K273C++2CL5
350	760	0.033	13.0	11.0	5.0	10.0	16.5	500	0.6	FX135K333C++2CL5
350	760	0.039	13.0	12.0	6.0	10.0	19.5	500	0.6	FX135K393C++2CL5
350	760	0.047	13.0	12.0	6.0	10.0	23.5	500	0.6	FX135K473C++2CL5
350	760	0.056	13.0	13.0	7.0	10.0	28.0	500	0.6	FX135K563C++2CL5
350	760	0.068	13.0	14.0	8.0	10.0	34.0	500	0.6	FX135K683C++2CL5
350	760	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FX135K103E++2EL5
350	760	0.012	18.0	11.0	5.0	15.0	4.8	400	0.6	FX135K123E++2EL5
350	760	0.015	18.0	11.0	5.0	15.0	6.0	400	0.6	FX135K153E++2EL5
350	760	0.018	18.0	11.0	5.0	15.0	7.2	400	0.6	FX135K183E++2EL5
350	760	0.022	18.0	11.0	5.0	15.0	8.8	400	0.6	FX135K223E++2EL5
350	760	0.027	18.0	11.0	5.0	15.0	10.8	400	0.6	FX135K273E++2EL5
350	760	0.033	18.0	11.0	5.0	15.0	13.2	400	0.6	FX135K333E++2EL5
350	760	0.039	18.0	11.0	5.0	15.0	15.6	400	0.6	FX135K393E++2EL5
350	760	0.047	18.0	11.0	5.0	15.0	18.8	400	0.6	FX135K473E++2EL5
350	760	0.056	18.0	11.0	5.0	15.0	22.4	400	0.6	FX135K563E++2EL5
350	760	0.068	18.0	12.0	6.0	15.0	27.2	400	0.6	FX135K683E++2EL5
350	760	0.082	18.0	12.0	6.0	15.0	32.8	400	0.6	FX135K823E++2EL5
350	760	0.10	18.0	13.0	7.0	15.0	40.0	400	0.8	FX135K104E++2EL5
350	760	0.10	18.0	17.5	6.0	15.0	40.0	400	0.8	FX135K104E++2EL5
350	760	0.12	18.0	13.5	7.5	15.0	48.0	400	0.8	FX135K124E++2EL5
350	760	0.12	18.0	17.5	6.0	15.0	48.0	400	0.8	FX135K124E++2EL5
350	760	0.15	18.0	14.0	8.0	15.0	60.0	400	0.8	FX135K154E++2EL5
350	760	0.18	18.0	14.5	8.5	15.0	72.0	400	0.8	FX135K184E++2EL5
350	760	0.22	18.0	16.0	10.0	15.0	88.0	400	0.8	FX135K224E++2EL5
350	760	0.27	18.0	19.0	11.0	15.0	108.0	400	0.8	FX135K274E++2EL5
350	760	0.33	18.0	19.0	11.0	15.0	132.0	400	0.8	FX135K334E++2EL5
350	760	0.039	26.0	15.5	6.0	22.5	7.8	200	0.6	FX135K393F++2FL5
350	760	0.047	26.0	15.5	6.0	22.5	9.4	200	0.6	FX135K473F++2FL5
350	760	0.056	26.0	15.5	6.0	22.5	11.2	200	0.6	FX135K563F++2FL5
350	760	0.068	26.0	15.5	6.0	22.5	13.6	200	0.6	FX135K683F++2FL5
350	760	0.082	26.0	15.5	6.0	22.5	16.4	200	0.6	FX135K823F++2FL5
350	760	0.10	26.0	15.5	6.0	22.5	20.0	200	0.6	FX135K104F++2FL5
350	760	0.12	26.0	15.5	6.0	22.5	24.0	200	0.6	FX135K124F++2FL5
350	760	0.15	26.0	15.5	6.0	22.5	30.0	200	0.6	FX135K154F++2FL5
350	760	0.18	26.0	15.5	6.0	22.5	36.0	200	0.6	FX135K184F++2FL5
350	760	0.22	26.0	16.5	7.0	22.5	44.0	200	0.8	FX135K224F++2FL5
350	760	0.27	26.0	16.5	7.0	22.5	54.0	200	0.6	FX135K274F++2FL5
350	760	0.33	26.0	17.0	8.5	22.5	66.0	200	0.6	FX135K334F++2FL5
350	760	0.47	26.0	19.0	10.0	22.5	94.0	200	0.8	FX135K474F++2FL5
350	760	0.56	26.0	20.0	11.0	22.5	112.0	200	0.8	FX135K564F++2FL5

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

FX1 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead Wire	Part Number
		Value	W	H	T	P	Current			
		μF	mm	mm	mm	mm	A	V/us	mm	
350	760	0.68	26.0	22.0	12.0	22.5	136.0	200	0.8	FX135K684F++2FL5
350	760	0.82	26.0	24.5	13.0	22.5	164.0	200	0.8	FX135K824F++2FL5
350	760	1.00	26.0	25.0	15.0	22.5	200.0	200	0.8	FX135K105F++2FL5
350	760	1.20	26.0	29.5	14.5	22.5	240.0	200	0.8	FX135K125F++2FL5
350	760	0.15	32.0	18.0	9.0	27.5	22.5	150	0.8	FX135K154G++2GL5
350	760	0.18	32.0	18.0	9.0	27.5	27.0	150	0.8	FX135K184G++2GL5
350	760	0.22	32.0	18.0	9.0	27.5	33.0	150	0.8	FX135K224G++2GL5
350	760	0.33	32.0	18.0	9.0	27.5	49.5	150	0.8	FX135K334G++2GL5
350	760	0.39	32.0	18.0	9.0	27.5	58.5	150	0.8	FX135K394G++2GL5
350	760	0.47	32.0	18.0	9.0	27.5	70.5	150	0.8	FX135K474G++2GL5
350	760	0.56	32.0	20.0	11.0	27.5	84.0	150	0.8	FX135K564G++2GL5
350	760	0.68	32.0	20.0	11.0	27.5	102.0	150	0.8	FX135K684G++2GL5
350	760	0.82	32.0	20.0	11.0	27.5	123.0	150	0.8	FX135K824G++2GL5
350	760	1.00	32.0	22.0	13.0	27.5	150.0	150	0.8	FX135K105G++2GL5
350	760	1.00	32.0	24.5	13.0	27.5	150.0	150	0.8	FX135K105G++2GL5
350	760	1.20	32.0	25.0	16.0	27.5	180.0	150	0.8	FX135K125G++2GL5
350	760	1.20	32.0	28.0	14.0	27.5	180.0	150	0.8	FX135K125G++2GL5
350	760	1.50	32.0	25.0	16.0	27.5	225.0	150	0.8	FX135K155G++2GL5
350	760	1.50	32.0	28.0	14.0	27.5	225.0	150	0.8	FX135K155G++2GL5
350	760	1.80	32.0	28.0	18.0	27.5	270.0	150	0.8	FX135K185G++2GL5
350	760	2.20	32.0	28.0	18.0	27.5	330.0	150	0.8	FX135M225G++2GL5
350	760	2.20	32.0	33.0	18.0	27.5	330.0	150	0.8	FX135K225G++2GL5
350	760	2.70	32.0	37.0	22.0	27.5	405.0	150	0.8	FX135K275G++2GL5
350	760	3.30	32.0	37.0	22.0	27.5	495.0	150	0.8	FX135K335G++2GL5
350	760	0.39	42.5	22.0	11.0	37.5	39.0	100	1.0	FX135K394K++2KL5
350	760	0.47	42.5	22.0	11.0	37.5	47.0	100	1.0	FX135K474K++2KL5
350	760	0.56	42.5	22.0	11.0	37.5	56.0	100	1.0	FX135K564K++2KL5
350	760	0.68	42.5	22.0	11.0	37.5	68.0	100	1.0	FX135K684K++2KL5
350	760	0.82	42.5	22.0	11.0	37.5	82.0	100	1.0	FX135K824K++2KL5
350	760	1.00	42.5	22.0	11.0	37.5	100.0	100	1.0	FX135K105K++2KL5
350	760	1.20	42.5	24.0	13.0	37.5	120.0	100	1.0	FX135K125K++2KL5
350	760	1.50	42.5	26.0	15.0	37.5	150.0	100	1.0	FX135K155K++2KL5
350	760	1.80	42.5	26.0	15.0	37.5	180.0	100	1.0	FX135K185K++2KL5
350	760	2.20	42.5	30.0	17.0	37.5	220.0	100	1.0	FX135K225K++2KL5
350	760	2.20	42.5	28.0	19.0	37.5	220.0	100	1.0	FX135K225K++2KL5
350	760	2.70	42.5	32.0	19.0	37.5	270.0	100	1.0	FX135K275K++2KL5
350	760	3.30	42.5	32.0	19.0	37.5	330.0	100	1.0	FX135K335K++2KL5
350	760	4.70	42.5	37.0	22.0	37.5	470.0	100	1.0	FX135K475K++2KL5
350	760	5.60	42.5	44.0	24.0	37.5	560.0	100	1.0	FX135K565K++2KL5
350	760	6.80	42.5	43.0	28.0	37.5	680.0	100	1.2	FX135K685K++2KL5
350	760	8.20	42.5	45.0	30.0	37.5	820.0	100	1.2	FX135K825K++2KL5
350	760	8.20	57.5	45.0	30.0	52.5	492.0	60	1.2	FX135K825M++2ML5
350	760	10.0	57.5	45.0	30.0	52.5	600.0	60	1.2	FX135K106M++2ML5
350	760	12.0	57.5	45.0	30.0	52.5	720.0	60	1.2	FX135K126M++2ML5
350	760	15.0	57.5	50.0	35.0	52.5	900.0	60	1.2	FX135K156M++2ML5
350	760	20.0	57.5	65.0	45.0	52.5	1200.0	60	1.2	FX135K206M++2ML5

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

FX1 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
440/480	1000	0.001	10.5	11.0	5.0	7.5	0.6	600	0.6	FX148K102B++2BL5
440/480	1000	0.0012	10.5	11.0	5.0	7.5	0.7	600	0.6	FX148K122B++2BL5
440/480	1000	0.0015	10.5	11.0	5.0	7.5	0.9	600	0.6	FX148K152B++2BL5
440/480	1000	0.0018	10.5	11.0	5.0	7.5	1.1	600	0.6	FX148K182B++2BL5
440/480	1000	0.0022	10.5	11.0	5.0	7.5	1.3	600	0.6	FX148K222B++2BL5
440/480	1000	0.0027	10.5	11.0	5.0	7.5	1.6	600	0.6	FX148K272B++2BL5
440/480	1000	0.0033	10.5	11.0	5.0	7.5	2.0	600	0.6	FX148K332B++2BL5
440/480	1000	0.0039	10.5	11.0	5.0	7.5	2.3	600	0.6	FX148K392B++2BL5
440/480	1000	0.0047	10.5	11.0	5.0	7.5	2.8	600	0.6	FX148K472B++2BL5
440/480	1000	0.0056	10.5	11.0	5.0	7.5	3.4	600	0.6	FX148K562B++2BL5
440/480	1000	0.0068	10.5	12.0	6.0	7.5	4.1	600	0.6	FX148K682B++2BL5
440/480	1000	0.0082	10.5	12.0	6.0	7.5	4.9	600	0.6	FX148K822B++2BL5
440/480	1000	0.010	10.5	12.0	6.0	7.5	6.0	600	0.6	FX148K103B++2BL5
440/480	1000	0.010	13.0	11.0	5.0	10.0	5.0	500	0.6	FX148K103C++2CL5
440/480	1000	0.012	13.0	11.0	5.0	10.0	6.0	500	0.6	FX148K123C++2CL5
440/480	1000	0.015	13.0	11.0	5.0	10.0	7.5	500	0.6	FX148K153C++2CL5
440/480	1000	0.018	13.0	11.0	5.0	10.0	9.0	500	0.6	FX148K183C++2CL5
440/480	1000	0.022	13.0	11.0	5.0	10.0	11.0	500	0.6	FX148K223C++2CL5
440/480	1000	0.027	13.0	12.0	6.0	10.0	13.5	500	0.6	FX148K273C++2CL5
440/480	1000	0.033	13.0	12.0	6.0	10.0	16.5	500	0.6	FX148K333C++2CL5
440/480	1000	0.039	13.0	13.0	7.0	10.0	19.5	500	0.6	FX148K393C++2CL5
440/480	1000	0.047	13.0	14.0	8.0	10.0	23.5	500	0.6	FX148K473C++2CL5
440/480	1000	0.056	13.0	14.0	8.0	10.0	28.0	500	0.6	FX148K563C++2CL5
440/480	1000	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FX148K103E++2EL5
440/480	1000	0.012	18.0	11.0	5.0	15.0	4.8	400	0.6	FX148K123E++2EL5
440/480	1000	0.015	18.0	11.0	5.0	15.0	6.0	400	0.6	FX148K153E++2EL5
440/480	1000	0.018	18.0	11.0	5.0	15.0	7.2	400	0.6	FX148K183E++2EL5
440/480	1000	0.022	18.0	11.0	5.0	15.0	8.8	400	0.6	FX148K223E++2EL5
440/480	1000	0.027	18.0	11.0	5.0	15.0	10.8	400	0.6	FX148K273E++2EL5
440/480	1000	0.033	18.0	11.0	5.0	15.0	13.2	400	0.6	FX148K333E++2EL5
440/480	1000	0.039	18.0	12.0	6.0	15.0	15.6	400	0.6	FX148K393E++2EL5
440/480	1000	0.047	18.0	12.0	6.0	15.0	18.8	400	0.6	FX148K473E++2EL5
440/480	1000	0.056	18.0	13.0	7.0	15.0	22.4	400	0.8	FX148K563E++2EL5
440/480	1000	0.068	18.0	13.5	7.5	15.0	27.2	400	0.8	FX148K683E++2EL5
440/480	1000	0.082	18.0	14.0	8.0	15.0	32.8	400	0.8	FX148K823E++2EL5
440/480	1000	0.10	18.0	14.5	8.5	15.0	40.0	400	0.8	FX148K104E++2EL5
440/480	1000	0.12	18.0	16.0	10.0	15.0	48.0	400	0.8	FX148K124E++2EL5
440/480	1000	0.15	18.0	19.0	11.0	15.0	60.0	400	0.8	FX148K154E++2EL5
440/480	1000	0.18	18.0	19.0	11.0	15.0	72.0	400	0.8	FX148K184E++2EL5
440/480	1000	0.22	18.0	22.0	12.5	15.0	88.0	400	0.8	FX148K224E++2EL5
440/480	1000	0.039	26.0	15.5	6.0	22.5	7.8	200	0.6	FX148K393F++2FL5
440/480	1000	0.047	26.0	15.5	6.0	22.5	9.4	200	0.6	FX148K473F++2FL5
440/480	1000	0.056	26.0	15.5	6.0	22.5	11.2	200	0.6	FX148K563F++2FL5
440/480	1000	0.068	26.0	15.5	6.0	22.5	13.6	200	0.6	FX148K683F++2FL5
440/480	1000	0.082	26.0	15.5	6.0	22.5	16.4	200	0.6	FX148K823F++2FL5

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

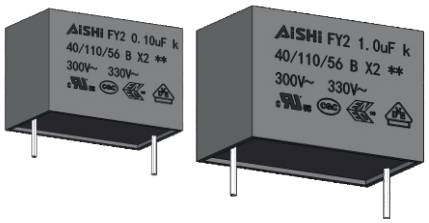
FX1 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part Number
		Value	W	H	T	P	Current		Wire	
		μF	mm	mm	mm	mm	A	V/us	mm	
440/480	1000	0.10	26.0	15.5	6.0	22.5	20.0	200	0.6	FX148K104F++2FL5
440/480	1000	0.12	26.0	15.5	6.0	22.5	24.0	200	0.6	FX148K124F++2FL5
440/480	1000	0.15	26.0	16.5	7.0	22.5	30.0	200	0.6	FX148K154F++2FL5
440/480	1000	0.18	26.0	17.0	8.5	22.5	36.0	200	0.6	FX148K184F++2FL5
440/480	1000	0.22	26.0	17.0	8.5	22.5	44.0	200	0.8	FX148K224F++2FL5
440/480	1000	0.27	26.0	19.0	10.0	22.5	54.0	200	0.6	FX148K274F++2FL5
440/480	1000	0.33	26.0	20.0	11.0	22.5	66.0	200	0.6	FX148K334F++2FL5
440/480	1000	0.39	26.0	20.0	11.0	22.5	78.0	200	0.6	FX148K394F++2FL5
440/480	1000	0.47	26.0	24.5	13.0	22.5	94.0	200	0.8	FX148K474F++2FL5
440/480	1000	0.56	26.0	25.0	15.0	22.5	112.0	200	0.8	FX148K564F++2FL5
440/480	1000	0.68	26.0	29.5	14.5	22.5	136.0	200	0.8	FX148K684F++2FL5
440/480	1000	0.15	32.0	18.0	9.0	27.5	22.5	150	0.8	FX148K154G++2GL5
440/480	1000	0.18	32.0	18.0	9.0	27.5	27.0	150	0.8	FX148K184G++2GL5
440/480	1000	0.22	32.0	18.0	9.0	27.5	33.0	150	0.8	FX148K224G++2GL5
440/480	1000	0.33	32.0	18.0	9.0	27.5	49.5	150	0.8	FX148K334G++2GL5
440/480	1000	0.39	32.0	20.0	11.0	27.5	58.5	150	0.8	FX148K394G++2GL5
440/480	1000	0.47	32.0	20.0	11.0	27.5	70.5	150	0.8	FX148K474G++2GL5
440/480	1000	0.56	32.0	22.0	13.0	27.5	84.0	150	0.8	FX148K564G++2GL5
440/480	1000	0.68	32.0	24.5	13.0	27.5	102.0	150	0.8	FX148K684G++2GL5
440/480	1000	0.82	32.0	25.0	16.0	27.5	123.0	150	0.8	FX148K824G++2GL5
440/480	1000	0.82	32.0	28.0	14.0	27.5	123.0	150	0.8	FX148K824G++2GL5
440/480	1000	1.00	32.0	28.0	18.0	27.5	150.0	150	0.8	FX148K105G++2GL5
440/480	1000	1.20	32.0	33.0	18.0	27.5	180.0	150	0.8	FX148K125G++2GL5
440/480	1000	1.50	32.0	33.0	18.0	27.5	225.0	150	0.8	FX148K155G++2GL5
440/480	1000	1.80	32.0	37.0	22.0	27.5	270.0	150	0.8	FX148K185G++2GL5
440/480	1000	0.33	42.5	22.0	11.0	37.5	33.0	100	1.0	FX148K334K++2KL5
440/480	1000	0.39	42.5	22.0	11.0	37.5	39.0	100	1.0	FX148K394K++2KL5
440/480	1000	0.47	42.5	22.0	11.0	37.5	47.0	100	1.0	FX148K474K++2KL5
440/480	1000	0.56	42.5	22.0	11.0	37.5	56.0	100	1.0	FX148K564K++2KL5
440/480	1000	0.68	42.5	22.0	11.0	37.5	68.0	100	1.0	FX148K684K++2KL5
440/480	1000	0.82	42.5	24.0	13.0	37.5	82.0	100	1.0	FX148K824K++2KL5
440/480	1000	1.00	42.5	24.0	13.0	37.5	100.0	100	1.0	FX148K105K++2KL5
440/480	1000	1.20	42.5	26.0	15.0	37.5	120.0	100	1.0	FX148K125K++2KL5
440/480	1000	1.50	42.5	30.0	17.0	37.5	150.0	100	1.0	FX148K155K++2KL5
440/480	1000	1.80	42.5	28.0	19.0	37.5	180.0	100	1.0	FX148K185K++2KL5
440/480	1000	2.20	42.5	32.0	19.0	37.5	220.0	100	1.0	FX148K225K++2KL5
440/480	1000	2.70	42.5	37.0	22.0	37.5	270.0	100	1.0	FX148K275K++2KL5
440/480	1000	3.30	42.5	44.0	24.0	37.5	330.0	100	1.0	FX148K335K++2KL5
440/480	1000	3.90	42.5	43.0	28.0	37.5	390.0	100	1.2	FX148K395K++2KL5
440/480	1000	4.70	42.5	45.0	30.0	37.5	470.0	100	1.2	FX148K475K++2KL5
440/480	1000	5.60	57.5	45.0	30.0	52.5	336.0	60	1.2	FX148K565M++2ML5
440/480	1000	6.80	57.5	45.0	30.0	52.5	408.0	60	1.2	FX148K685M++2ML5
440/480	1000	8.20	57.5	50.0	35.0	52.5	492.0	60	1.2	FX148K825M++2ML5
440/480	1000	10.0	57.5	50.0	35.0	52.5	600.0	60	1.2	FX148K106M++2ML5
440/480	1000	15.0	57.5	65.0	45.0	52.5	900.0	60	1.2	FX148K156M++2ML5

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

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

- Used in electromagnetic interference suppression in across-the-line and line-to-ground applications which required Y2 safety classification. Failure of the capacitor would not lead to danger of electric shock.
- Used in inverter of wind power, UPS systems.
- 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 +1200Vac for 60s or 4000VDC 2s (terminal to terminal)
Test Voltage Terminal to Case	$2U_R$ +1500 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 s (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 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 (△tgδ):≤80 X 10^{-4} 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 (△tgδ):≤80 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FY2 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
300/330	1500	0.0010	10.5	11.0	5.0	7.5	0.6	600	0.6	FY230K102B++2BL5
300/330	1500	0.0012	10.5	11.0	5.0	7.5	0.7	600	0.6	FY230K122B++2BL5
300/330	1500	0.0015	10.5	11.0	5.0	7.5	0.9	600	0.6	FY230K152B++2BL5
300/330	1500	0.0018	10.5	11.0	5.0	7.5	1.1	600	0.6	FY230K182B++2BL5
300/330	1500	0.0022	10.5	11.0	5.0	7.5	1.3	600	0.6	FY230K222B++2BL5
300/330	1500	0.0027	10.5	11.0	5.0	7.5	1.6	600	0.6	FY230K272B++2BL5
300/330	1500	0.0033	10.5	11.0	5.0	7.5	2.0	600	0.6	FY230K332B++2BL5
300/330	1500	0.0039	10.5	11.0	5.0	7.5	2.3	600	0.6	FY230K392B++2BL5
300/330	1500	0.0047	10.5	12.0	6.0	7.5	2.8	600	0.6	FY230K472B++2BL5
300/330	1500	0.0056	10.5	12.0	6.0	7.5	3.4	600	0.6	FY230K562B++2BL5
300/330	1500	0.0010	13.0	11.0	5.0	10.0	0.5	500	0.6	FY230K102C++2CL5
300/330	1500	0.0012	13.0	11.0	5.0	10.0	0.6	500	0.6	FY230K122C++2CL5
300/330	1500	0.0015	13.0	11.0	5.0	10.0	0.8	500	0.6	FY230K152C++2CL5
300/330	1500	0.0018	13.0	11.0	5.0	10.0	0.9	500	0.6	FY230K182C++2CL5
300/330	1500	0.0022	13.0	11.0	5.0	10.0	1.1	500	0.6	FY230K222C++2CL5
300/330	1500	0.0027	13.0	11.0	5.0	10.0	1.4	500	0.6	FY230K272C++2CL5
300/330	1500	0.0033	13.0	11.0	5.0	10.0	1.7	500	0.6	FY230K332C++2CL5
300/330	1500	0.0039	13.0	11.0	5.0	10.0	2.0	500	0.6	FY230K392C++2CL5
300/330	1500	0.0047	13.0	11.0	5.0	10.0	2.4	500	0.6	FY230K472C++2CL5
300/330	1500	0.0056	13.0	11.0	5.0	10.0	2.8	500	0.6	FY230K562C++2CL5
300/330	1500	0.0068	13.0	11.0	5.0	10.0	3.4	500	0.6	FY230K682C++2CL5
300/330	1500	0.0082	13.0	12.0	6.0	10.0	4.1	500	0.6	FY230K822C++2CL5
300/330	1500	0.010	13.0	12.0	6.0	10.0	5.0	500	0.6	FY230K103C++2CL5
300/330	1500	0.012	13.0	12.0	6.0	10.0	6.0	500	0.6	FY230K123C++2CL5
300/330	1500	0.015	13.0	12.0	6.0	10.0	7.5	500	0.6	FY230K153C++2CL5
300/330	1500	0.0022	18.0	11.0	5.0	15.0	0.9	400	0.6	FY230K222E++2EL5
300/330	1500	0.0027	18.0	11.0	5.0	15.0	1.1	400	0.6	FY230K272E++2EL5
300/330	1500	0.0033	18.0	11.0	5.0	15.0	1.3	400	0.6	FY230K332E++2EL5
300/330	1500	0.0039	18.0	11.0	5.0	15.0	1.6	400	0.6	FY230K392E++2EL5
300/330	1500	0.0047	18.0	11.0	5.0	15.0	1.9	400	0.6	FY230K472E++2EL5
300/330	1500	0.0056	18.0	11.0	5.0	15.0	2.2	400	0.6	FY230K562E++2EL5
300/330	1500	0.0068	18.0	11.0	5.0	15.0	2.7	400	0.6	FY230K682E++2EL5
300/330	1500	0.0082	18.0	11.0	5.0	15.0	3.3	400	0.6	FY230K822E++2EL5
300/330	1500	0.010	18.0	11.0	5.0	15.0	4.0	400	0.6	FY230K103E++2EL5
300/330	1500	0.012	18.0	11.0	5.0	15.0	4.8	400	0.6	FY230K123E++2EL5
300/330	1500	0.015	18.0	11.0	5.0	15.0	6.0	400	0.6	FY230K153E++2EL5
300/330	1500	0.018	18.0	12.0	6.0	15.0	7.2	400	0.6	FY230K183E++2EL5
300/330	1500	0.022	18.0	12.0	6.0	15.0	8.8	400	0.6	FY230K223E++2EL5
300/330	1500	0.027	18.0	13.0	7.0	15.0	10.8	400	0.8	FY230K273E++2EL5
300/330	1500	0.033	18.0	13.5	7.5	15.0	13.2	400	0.8	FY230K333E++2EL5
300/330	1500	0.039	18.0	13.5	7.5	15.0	15.6	400	0.8	FY230K393E++2EL5
300/330	1500	0.047	18.0	14.5	8.5	15.0	18.8	400	0.8	FY230K473E++2EL5
300/330	1500	0.056	18.0	16.0	10.0	15.0	22.4	400	0.8	FY230K563E++2EL5
300/330	1500	0.068	18.0	16.0	10.0	15.0	27.2	400	0.8	FY230K683E++2EL5
300/330	1500	0.082	18.0	19.0	11.0	15.0	32.8	400	0.8	FY230K823E++2EL5

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

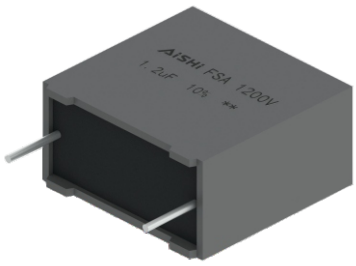
FY2 series

Technical data

Vac	Vdc	Cap	Dimensions			Lead Spacing	Peak	dv/dt	Lead	Part
		Value	W	H	T	P	Current		Wire	Number
		μF	mm	mm	mm	mm	A	V/us	mm	
300/330	1500	0.033	26.0	15.5	6.0	22.5	6.6	200	0.6	FY230K333F++2FL5
300/330	1500	0.039	26.0	15.5	6.0	22.5	7.8	200	0.6	FY230K393F++2FL5
300/330	1500	0.047	26.0	15.5	6.0	22.5	9.4	200	0.6	FY230K473F++2FL5
300/330	1500	0.056	26.0	15.5	6.0	22.5	11.2	200	0.6	FY230K563F++2FL5
300/330	1500	0.068	26.0	16.5	7.0	22.5	13.6	200	0.8	FY230K683F++2FL5
300/330	1500	0.082	26.0	16.5	7.0	22.5	16.4	200	0.8	FY230K823F++2FL5
300/330	1500	0.10	26.0	17.0	8.5	22.5	20.0	200	0.8	FY230K104F++2FL5
300/330	1500	0.12	26.0	17.0	8.5	22.5	24.0	200	0.8	FY230K124F++2FL5
300/330	1500	0.15	26.0	19.0	10.0	22.5	30.0	200	0.8	FY230K154F++2FL5
300/330	1500	0.18	26.0	20.0	11.0	22.5	36.0	200	0.8	FY230K184F++2FL5
300/330	1500	0.22	26.0	22.0	12.0	22.5	44.0	200	0.8	FY230K224F++2FL5
300/330	1500	0.27	26.0	24.5	13.0	22.5	54.0	200	0.8	FY230K274F++2FL5
300/330	1500	0.33	26.0	25.0	15.0	22.5	66.0	200	0.8	FY230K334F++2FL5
300/330	1500	0.39	26.0	29.5	14.5	22.5	78.0	200	0.8	FY230K394F++2FL5
300/330	1500	0.10	32.0	18.0	9.0	27.5	15.0	150	0.8	FY230K104G++2GL5
300/330	1500	0.12	32.0	18.0	9.0	27.5	18.0	150	0.8	FY230K124G++2GL5
300/330	1500	0.15	32.0	18.0	9.0	27.5	22.5	150	0.8	FY230K154G++2GL5
300/330	1500	0.18	32.0	20.0	11.0	27.5	27.0	150	0.8	FY230K184G++2GL5
300/330	1500	0.22	32.0	20.0	11.0	27.5	33.0	150	0.8	FY230K224G++2GL5
300/330	1500	0.27	32.0	22.0	13.0	27.5	40.5	150	0.8	FY230K274G++2GL5
300/330	1500	0.33	32.0	24.5	13.0	27.5	49.5	150	0.8	FY230K334G++2GL5
300/330	1500	0.39	32.0	25.0	16.0	27.5	58.5	150	0.8	FY230K394G++2GL5
300/330	1500	0.39	32.0	28.0	14.0	27.5	58.5	150	0.8	FY230M394G++2GL5
300/330	1500	0.47	32.0	28.0	18.0	27.5	70.5	150	0.8	FY230K474G++2GL5
300/330	1500	0.56	32.0	28.0	18.0	27.5	84.0	150	0.8	FY230K564G++2GL5
300/330	1500	0.68	32.0	33.0	18.0	27.5	102.0	150	0.8	FY230K684G++2GL5
300/330	1500	0.82	32.0	37.0	22.0	27.5	123.0	150	0.8	FY230K824G++2GL5
300/330	1500	1.00	32.0	37.0	22.0	27.5	150.0	150	0.8	FY230K105G++2GL5
300/330	1500	0.33	42.5	22.0	11.0	37.5	33.0	100	1.0	FY230K334K++2KL5
300/330	1500	0.39	42.5	24.0	13.0	37.5	39.0	100	1.0	FY230K394K++2KL5
300/330	1500	0.47	42.5	24.0	13.0	37.5	47.0	100	1.0	FY230K474K++2KL5
300/330	1500	0.56	42.5	26.0	15.0	37.5	56.0	100	1.0	FY230K564K++2KL5
300/330	1500	0.68	42.5	30.0	17.0	37.5	68.0	100	1.0	FY230K684K++2KL5
300/330	1500	0.82	42.5	30.0	17.0	37.5	82.0	100	1.0	FY230K824M++2KL5
300/330	1500	0.82	42.5	28.0	19.0	37.5	82.0	100	1.0	FY230K824K++2KL5
300/330	1500	1.00	42.5	32.0	19.0	37.5	100.0	100	1.0	FY230K105K++2KL5

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

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

- Widely used in high voltage, high frequency circuit.
- IGBT modules protection.

Features

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

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 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 (△tgδ):≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤20 X 10^{-4} 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%

FSA series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR Typical	ESL	dv/dt	Lead Wire	Part Number
	Value	W	H	T			100KHz	Current	100KHz				
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	V/us	mm	
850	0.15	32.0	20.0	11.0	27.5	\	8	195	14.5	24	1300	0.8	FSA2PK154G++2GL5
850	0.22	32.0	22.0	13.0	27.5	\	10	286	10.5	24	1300	0.8	FSA2PK224G++2GL5
850	0.33	32.0	28.0	14.0	27.5	\	13	429	7.6	26	1300	1.0	FSA2PK334G++2GL5
850	0.47	32.0	33.0	18.0	27.5	\	14	611	5.8	26	1300	1.0	FSA2PK474G++2GL5
850	0.68	32.0	37.0	22.0	27.5	\	16	884	4.6	28	1300	1.0	FSA2PK684G++2GL5
850	1.00	42.5	40.0	20.0	37.5	10.2	22	800	5.9	30	800	1.2	FSA2PK105K++4KB5
850	2.00	42.5	44.0	24.0	37.5	10.2	29	1600	3.9	30	800	1.2	FSA2PK205K++4KB5
850	3.00	57.5	45.0	30.0	52.5	20.3	29	1500	5.0	35	500	1.2	FSA2PK305K++4KD5
850	4.00	57.5	45.0	30.0	52.5	20.3	29	2000	4.2	35	500	1.2	FSA2PK405K++4KD5
850	5.00	57.5	50.0	35.0	52.5	20.3	29	2500	3.9	35	500	1.2	FSA2PK505K++4KD5
1000	0.15	32.0	20.0	11.0	27.5	\	8	210	14.0	24	1400	0.8	FSA3KK154G++2GL5
1000	0.22	32.0	22.0	13.0	27.5	\	9	308	9.9	24	1400	0.8	FSA3KK224G++2GL5
1000	0.33	32.0	28.0	14.0	27.5	\	10	462	7.2	26	1400	1.0	FSA3KK334G++2GL5
1000	0.47	32.0	33.0	18.0	27.5	\	12	658	5.6	26	1400	1.0	FSA3KK474G++2GL5
1000	0.68	32.0	37.0	22.0	27.5	\	14	612	4.4	28	1400	1.0	FSA3KK684G++2GL5
1000	1.00	42.5	40.0	20.0	37.5	10.2	16	900	5.5	30	900	1.2	FSA3KK105K++4KB5
1000	1.50	42.5	37.0	28.0	37.5	10.2	16	1350	4.2	30	900	1.2	FSA3KK155K++4KB5
1000	2.00	42.5	45.0	30.0	37.5	20.3	18	1800	3.7	30	900	1.2	FSA3KK205K++4KD5
1000	2.20	42.5	45.0	30.0	37.5	20.3	18	1980	3.6	30	900	1.2	FSA3KK225K++4KD5
1000	3.00	57.5	45.0	30.0	52.5	20.3	20	1650	4.7	35	550	1.2	FSA3KK305K++4KD5
1000	4.00	57.5	50.0	35.0	52.5	20.3	22	2200	4.2	35	550	1.2	FSA3KK405K++4KD5
1000	4.70	57.5	50.0	35.0	52.5	20.3	24	2585	3.9	35	550	1.2	FSA3KK475K++4KD5
1200	0.10	32.0	20.0	11.0	27.5	\	7	160	18.5	24	1600	0.8	FSA3BK104G++2GL5
1200	0.15	32.0	22.0	13.0	27.5	\	10	240	12.8	24	1600	0.8	FSA3BK154G++2GL5
1200	0.22	32.0	28.0	14.0	27.5	\	12	352	9.2	26	1600	1.0	FSA3BK224G++2GL5
1200	0.33	32.0	33.0	18.0	27.5	\	14	528	6.7	26	1600	1.0	FSA3BK334G++2GL5
1200	0.47	32.0	37.0	22.0	27.5	\	14	752	5.3	28	1600	1.0	FSA3BK474G++2GL5
1200	0.68	42.5	40.0	20.0	37.5	10.2	16	680	6.6	30	1000	1.2	FSA3BK684K++4KB5
1200	1.00	42.5	40.0	20.0	37.5	10.2	18	1000	5.1	30	1000	1.2	FSA3BK105K++4KB5
1200	1.20	42.5	37.0	28.0	37.5	10.2	18	1200	4.4	30	1000	1.2	FSA3BK125K++4KB5
1200	2.00	57.5	45.0	30.0	52.5	20.3	20	1200	5.5	35	600	1.2	FSA3BK205K++4KD5
1200	2.20	57.5	45.0	30.0	52.5	20.3	20	1320	5.2	35	600	1.2	FSA3BK225K++4KD5
1200	2.50	57.5	45.0	30.0	52.5	20.3	22	1500	4.8	35	600	1.2	FSA3BK255K++4KD5
1200	3.00	57.5	50.0	35.0	52.5	20.3	22	1800	4.5	35	600	1.2	FSA3BK305K++4KD5
1200	3.30	57.5	50.0	35.0	52.5	20.3	24	1980	4.1	35	600	1.2	FSA3BK335K++4KD5

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

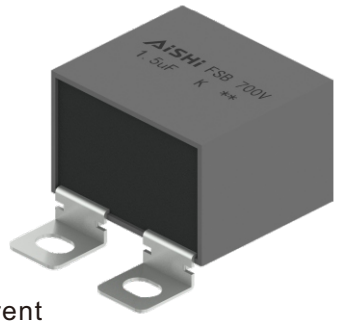
FSA series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR Typical	ESL	dv/dt	Lead Wire	Part Number
	Value	W	H	T			100KHz	Current	100KHz				
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	V/us	mm	
1600	0.10	32.0	22.0	13.0	27.5	\	8	190	13.5	24	1900	0.8	FSA3WK104G++2GL5
1600	0.15	32.0	24.5	13.0	27.5	\	9	285	10.5	24	1900	0.8	FSA3WK154G++2GL5
1600	0.18	32.0	28.0	14.0	27.5	\	10	342	9.5	26	1900	1.0	FSA3WK184G++2GL5
1600	0.22	32.0	33.0	18.0	27.5	\	12	418	8.0	26	1900	1.0	FSA3WK224G++2GL5
1600	0.27	32.0	33.0	18.0	27.5	\	14	513	7.0	26	1900	1.0	FSA3WK274G++2GL5
1600	0.33	32.0	37.0	22.0	27.5	\	15	627	6.8	28	1900	1.0	FSA3WK334G++2GL5
1600	0.39	32.0	37.0	22.0	27.5	\	15	741	6.5	28	1900	1.0	FSA3WK394G++2GL5
1600	0.47	42.5	32.0	19.0	37.5	\	16	588	6.0	30	1250	1.0	FSA3WK474G++2GL5
1600	0.68	42.5	40.0	20.0	37.5	10.2	18	850	5.0	30	1250	1.2	FSA3WK684K++4KB5
1600	0.82	42.5	44.0	24.0	37.5	10.2	18	1025	5.0	30	1250	1.2	FSA3WK824K++4KB5
1600	1.00	42.5	45.0	30.0	37.5	20.3	19	1250	4.8	30	1250	1.2	FSA3WK105K++4KD5
1600	1.20	42.5	45.0	30.0	37.5	20.3	19	1500	4.8	30	1250	1.2	FSA3WK125K++4KD5
1600	1.50	57.5	45.0	30.0	52.5	20.3	20	1125	4.5	35	750	1.2	FSA3WK155K++4KD5
1600	2.00	57.5	50.0	35.0	52.5	20.3	22	1500	4.2	35	750	1.2	FSA3WK205K++4KD5
2000	0.033	32.0	20.0	11.0	27.5	\	5	76	42.5	24	2300	0.8	FSA3DK333G++2GL5
2000	0.047	32.0	20.0	11.0	27.5	\	6	108	30.5	24	2300	0.8	FSA3DK473G++2GL5
2000	0.068	32.0	22.0	13.0	27.5	\	8	156	20.8	24	2300	0.8	FSA3DK683G++2GL5
2000	0.10	32.0	28.0	14.0	27.5	\	10	230	15.2	26	2300	1.0	FSA3DK104G++2GL5
2000	0.15	32.0	33.0	18.0	27.5	\	15	345	10.8	26	2300	1.0	FSA3DK154G++2GL5
2000	0.22	32.0	33.0	18.0	27.5	\	17	506	7.8	26	2300	1.0	FSA3DK224G++2GL5
2000	0.33	42.5	40.0	20.0	37.5	10.2	16	462	9.4	30	1400	1.2	FSA3DK334K++4KB5
2000	0.47	42.5	44.0	24.0	37.5	10.2	18	658	8.3	30	1400	1.2	FSA3DK474K++4KB5
2000	0.68	42.5	45.0	30.0	37.5	20.3	20	952	5.5	30	1400	1.2	FSA3DK684K++4KD5
2000	1.00	57.5	45.0	30.0	52.5	20.3	22	850	7.3	35	850	1.2	FSA3DK105K++4KD5
2000	1.50	57.5	50.0	35.0	52.5	20.3	24	1275	5.6	35	850	1.2	FSA3DK155K++4KD5

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

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

- Widely use in high voltage, high frequency circuits.
- IGBT modules protection.

Features

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

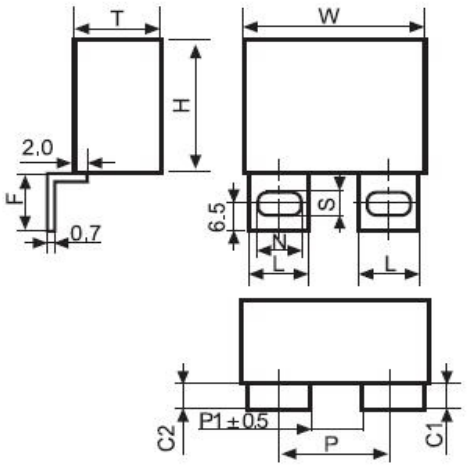
Specifications

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 Voltagge	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 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 (△tgδ):≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±5% DF change (△tgδ):≤20 X 10^{-4} 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%

FSB series

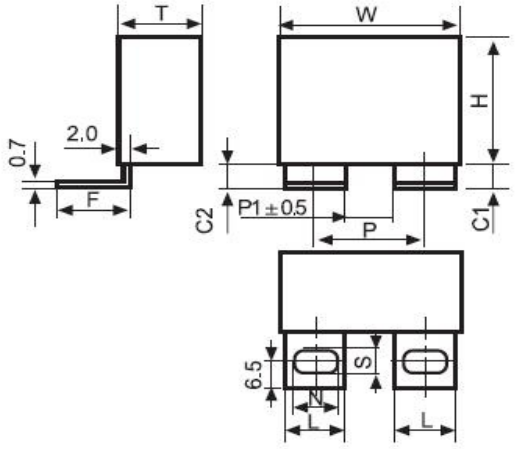
Outline Drawing

Style S



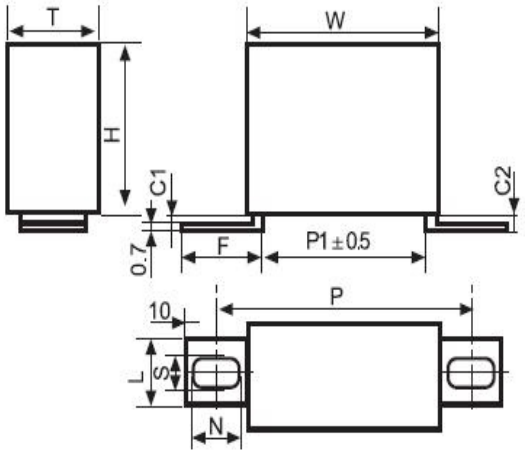
L x F x N x S=14.0 x 16.0 x 10.2 x 6.2

Style N



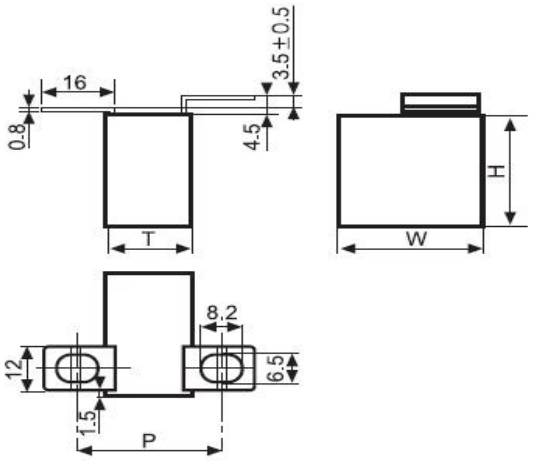
L x F x N x S=14.0 x 16.0 x 10.2 x 6.2

Style W



L x F x N x S=14,0 x 22,0 x 11,2 x 6,2

Style U



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.

FSB series

Technical data

Vdc	Cap	Dimensions			Irms	Peak	ESR Typical	ESL	dv/dt	Style	Part Number
	Value	W	H	T	100KHz@70°C	Current	100KHz@70°C				
	μF	mm	mm	mm	A	A	mΩ	nH	V/us		
850	0.47	42.5	40.0	20.0	14	357	9.4	40	760	S	FSB2PK474N++SN6G
850	0.68	42.5	40.0	20.0	17	517	6.6	40	760	S	FSB2PK684N++SN6G
850	1.0	42.5	40.0	20.0	20	760	4.6	40	760	S	FSB2PK105N++SN6G
850	1.5	42.5	37.0	28.0	27	1140	3.1	36	760	S	FSB2PK155N++SN6G
850	1.5	42.5	35.5	33.5	28	1140	3.0	36	760	S	FSB2PJ155N++SN6G
850	2.0	42.5	45.0	30.0	34	1520	2.4	43	760	S	FSB2PK205N++SN6G
850	2.2	42.5	45.0	30.0	35	1672	2.2	43	760	S	FSB2PK225N++SN6G
850	2.5	57.5	45.0	30.0	37	1175	2.0	45	470	S	FSB2PK255P++SN6L
850	3.0	57.5	45.0	30.0	30	1410	3.5	45	470	S	FSB2PK305P++SN6L
850	3.3	57.5	45.0	30.0	31	1551	3.2	45	470	S	FSB2PK335P++SN6L
850	4.0	57.5	50.0	35.0	34	1880	2.6	48	470	S	FSB2PK405P++SN6L
850	5.0	57.5	50.0	35.0	40	2350	2.2	48	470	S	FSB2PK505P++SN6L
1000	0.47	42.5	40.0	20.0	14	400	8.7	40	850	S	FSB3KK474N++SN6G
1000	0.68	42.5	40.0	20.0	18	578	6.1	40	850	S	FSB3KK684N++SN6G
1000	1.0	42.5	40.0	20.0	20	850	4.3	40	850	S	FSB3KK105N++SN6G
1000	1.5	42.5	37.0	28.0	28	1275	2.9	36	850	S	FSB3KK155N++SN6G
1000	1.5	42.5	35.5	33.5	29	1275	2.8	36	850	S	FSB3KJ155N++SN6G
1000	2.0	42.5	45.0	30.0	35	1700	2.3	43	850	S	FSB3KK205N++SN6G
1000	2.2	57.5	45.0	30.0	28	1166	4.4	45	530	S	FSB3KK225P++SN6L
1000	2.5	57.5	45.0	30.0	29	1325	3.8	45	530	S	FSB3KK255P++SN6L
1000	3.0	57.5	45.0	30.0	31	1590	3.2	45	530	S	FSB3KK305P++SN6L
1000	3.3	57.5	45.0	30.0	32	1749	3.0	45	530	S	FSB3KK335P++SN6L
1000	4.0	57.5	50.0	35.0	38	2120	2.5	48	530	S	FSB3KK405P++SN6L
1200	0.33	42.5	40.0	20.0	13	330	10.9	40	1000	S	FSB3BK334N++SN6G
1200	0.47	42.5	40.0	20.0	16	470	7.7	40	1000	S	FSB3BK474N++SN6G
1200	0.68	42.5	40.0	20.0	19	680	5.4	40	1000	S	FSB3BK684N++SN6G
1200	1.0	42.5	37.0	28.0	25	1000	3.8	36	1000	S	FSB3BK105N++SN6G
1200	1.2	42.5	37.0	28.0	27	1200	3.2	36	1000	S	FSB3BJ125N++SN6G
1200	1.2	42.5	35.5	33.5	28	1200	3.0	36	1000	S	FSB3BK125N++SN6G
1200	1.5	42.5	45.0	30.0	32	1500	2.6	43	1000	S	FSB3BK155N++SN6G
1200	2.0	57.5	45.0	30.0	27	1200	4.1	45	600	S	FSB3BK205P++SN6L
1200	2.2	57.5	45.0	30.0	28	1320	3.8	45	600	S	FSB3BK225P++SN6L
1200	2.5	57.5	45.0	30.0	30	1500	3.3	45	600	S	FSB3BK255P++SN6L
1200	3.0	57.5	50.0	35.0	35	1800	2.9	48	600	S	FSB3BK305P++SN6L
1200	3.3	57.5	50.0	35.0	38	1980	2.6	48	600	S	FSB3BK335P++SN6L
2000	0.1	42.5	40.0	20.0	8	140	26.8	40	1400	S	FSB3DK104N++SN6G
2000	0.15	42.5	40.0	20.0	10	210	17.9	40	1400	S	FSB3DK154N++SN6G
2000	0.22	42.5	40.0	20.0	12	308	12.3	40	1400	S	FSB3DK224N++SN6G
2000	0.33	42.5	40.0	20.0	16	462	8.3	40	1400	S	FSB3DK334N++SN6G
2000	0.47	42.5	40.0	20.0	19	658	5.9	40	1400	S	FSB3DK474N++SN6G
2000	0.68	42.5	44.0	24.0	24	952	4.1	43	1400	S	FSB3DJ684N++SN6G
2000	0.68	42.5	35.5	33.5	25	952	4.0	43	1400	S	FSB3DK684N++SN6G
2000	0.82	42.5	45.0	30.0	28	1148	3.5	43	1400	S	FSB3DK824N++SN6G
2000	1.0	57.5	45.0	30.0	23	900	5.9	45	900	S	FSB3DK105P++SN6L
2000	1.2	57.5	45.0	30.0	25	1080	4.9	45	900	S	FSB3DK125P++SN6L
2000	1.5	57.5	50.0	35.0	30	1350	4.0	48	900	S	FSB3DK155P++SN6L

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

FSB series

Technical data

Vdc	Cap	Dimensions			Irms	Peak	ESR Typical	ESL	dv/dt	Style	Part Number
	Value	W	H	T	100KHz@70°C	Current	100KHz@70°C				
	μF	mm	mm	mm	A	A	mΩ	nH	V/us		
850	0.47	42.5	40.0	20.0	14	357	9.4	40	760	N	FSB2PK474N++NN6G
850	0.68	42.5	40.0	20.0	17	517	6.6	40	760	N	FSB2PK684N++NN6G
850	1.0	42.5	40.0	20.0	20	760	4.6	40	760	N	FSB2PK105N++NN6G
850	1.5	42.5	37.0	28.0	27	1140	3.1	36	760	N	FSB2PK155N++NN6G
850	1.5	42.5	35.5	33.5	28	1140	3.0	36	760	N	FSB2PJ155N++NN6G
850	2.0	42.5	45.0	30.0	34	1520	2.4	43	760	N	FSB2PK205N++NN6G
850	2.2	42.5	45.0	30.0	35	1672	2.2	43	760	N	FSB2PK225N++NN6G
850	2.5	57.5	45.0	30.0	37	1175	2.0	45	470	N	FSB2PK255P++NN6L
850	3.0	57.5	45.0	30.0	30	1410	3.5	45	470	N	FSB2PK305P++NN6L
850	3.3	57.5	45.0	30.0	31	1551	3.2	45	470	N	FSB2PK335P++NN6L
850	4.0	57.5	50.0	35.0	34	1880	2.6	48	470	N	FSB2PK405P++NN6L
850	5.0	57.5	50.0	35.0	40	2350	2.2	48	470	N	FSB2PK505P++NN6L
1000	0.47	42.5	40.0	20.0	14	400	8.7	40	850	N	FSB3KK474N++NN6G
1000	0.68	42.5	40.0	20.0	18	578	6.1	40	850	N	FSB3KK684N++NN6G
1000	1.0	42.5	40.0	20.0	20	850	4.3	40	850	N	FSB3KK105N++NN6G
1000	1.5	42.5	37.0	28.0	28	1275	2.9	36	850	N	FSB3KK155N++NN6G
1000	1.5	42.5	35.5	33.5	29	1275	2.8	36	850	N	FSB3KJ155N++NN6G
1000	2.0	42.5	45.0	30.0	35	1700	2.3	43	850	N	FSB3KK205N++NN6G
1000	2.2	57.5	45.0	30.0	28	1166	4.4	45	530	N	FSB3KK225P++NN6L
1000	2.5	57.5	45.0	30.0	29	1325	3.8	45	530	N	FSB3KK255P++NN6L
1000	3.0	57.5	45.0	30.0	31	1590	3.2	45	530	N	FSB3KK305P++NN6L
1000	3.3	57.5	45.0	30.0	32	1749	3.0	45	530	N	FSB3KK335P++NN6L
1000	4.0	57.5	50.0	35.0	38	2120	2.5	48	530	N	FSB3KK405P++NN6L
1200	0.33	42.5	40.0	20.0	13	330	10.9	40	1000	N	FSB3BK334N++NN6G
1200	0.47	42.5	40.0	20.0	16	470	7.7	40	1000	N	FSB3BK474N++NN6G
1200	0.68	42.5	40.0	20.0	19	680	5.4	40	1000	N	FSB3BK684N++NN6G
1200	1.0	42.5	37.0	28.0	25	1000	3.8	36	1000	N	FSB3BK105N++NN6G
1200	1.2	42.5	37.0	28.0	27	1200	3.2	36	1000	N	FSB3BJ125N++NN6G
1200	1.2	42.5	35.5	33.5	28	1200	3.0	36	1000	N	FSB3BK125N++NN6G
1200	1.5	42.5	45.0	30.0	32	1500	2.6	43	1000	N	FSB3BK155N++NN6G
1200	2.0	57.5	45.0	30.0	27	1200	4.1	45	600	N	FSB3BK205P++NN6L
1200	2.2	57.5	45.0	30.0	28	1320	3.8	45	600	N	FSB3BK225P++NN6L
1200	2.5	57.5	45.0	30.0	30	1500	3.3	45	600	N	FSB3BK255P++NN6L
1200	3.0	57.5	50.0	35.0	35	1800	2.9	48	600	N	FSB3BK305P++NN6L
1200	3.3	57.5	50.0	35.0	38	1980	2.6	48	600	N	FSB3BK335P++NN6L
2000	0.1	42.5	40.0	20.0	8	140	26.8	40	1400	N	FSB3DK104N++NN6G
2000	0.15	42.5	40.0	20.0	10	210	17.9	40	1400	N	FSB3DK154N++NN6G
2000	0.22	42.5	40.0	20.0	12	308	12.3	40	1400	N	FSB3DK224N++NN6G
2000	0.33	42.5	40.0	20.0	16	462	8.3	40	1400	N	FSB3DK334N++NN6G
2000	0.47	42.5	40.0	20.0	19	658	5.9	40	1400	N	FSB3DK474N++NN6G
2000	0.68	42.5	44.0	24.0	24	952	4.1	43	1400	N	FSB3DJ684N++NN6G
2000	0.68	42.5	35.5	33.5	25	952	4.0	43	1400	N	FSB3DK684N++NN6G
2000	0.82	42.5	45.0	30.0	28	1148	3.5	43	1400	N	FSB3DK824N++NN6G
2000	1.0	57.5	45.0	30.0	23	900	5.9	45	900	N	FSB3DK105P++NN6L
2000	1.2	57.5	45.0	30.0	25	1080	4.9	45	900	N	FSB3DK125P++NN6L
2000	1.5	57.5	50.0	35.0	30	1350	4.0	48	900	N	FSB3DK155P++NN6L

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

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 $Pj=Rs*Irms^2$

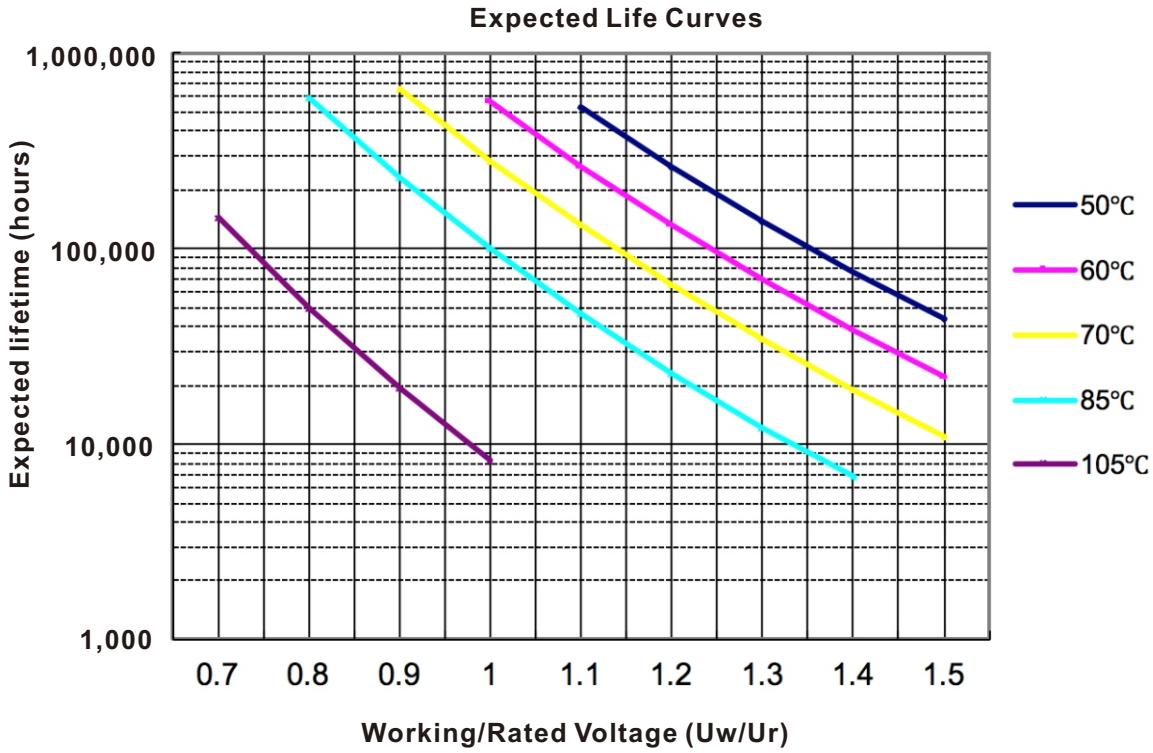
Pd: Dielectric losses

$$Pd= Xc*Irms^2*\tan\delta= Irms^2 / (2*\pi*f*C)*\tan\delta$$

T_{hs}: Hot spot temperature within the capacitor

$$T_{hs} = Ta + (Pj+ Pd)*Rth$$

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



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 terminal / 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.

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

- Widely use in high voltage, high frequency circuits.
- IGBT modules protection.

Features

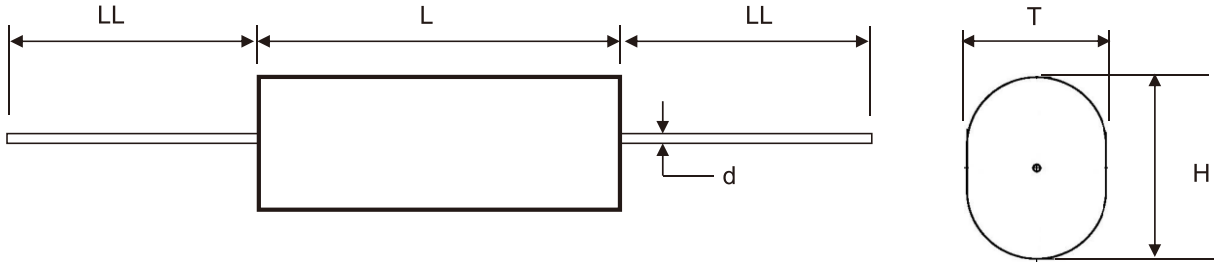
- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications

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 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 (△tg δ): ≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tg δ): ≤20X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FSC series

Dimensions



Dimensions - Lead wires

T	L	d	LL
(mm) max	(mm) max	(mm) ±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

FSC series

Technical data

Vdc	Cap	Dimensions			Irms	Peak	$ESR_{Typical}$	ESL	dv/dt	Lead Wire	Part Number
	Value	L	H	T	100KHz	Current	100KHz				
	μF	mm max	mm max	mm max	70°C A	A	mΩ	nH	V/us	mm	
600	0.10	34.0	12.0	6.0	3.0	25.0	28.0	17	250	0.8	FSC2KK104034XLLN
600	0.15	34.0	13.0	7.0	4.5	37.5	13.0	18	250	0.8	FSC2KK154034XLLN
600	0.22	34.0	14.5	8.0	5.0	55.0	12.0	19	250	0.8	FSC2KK224034XLLN
600	0.33	34.0	16.0	10.0	6.0	82.5	9.0	19	250	0.8	FSC2KK334034XLLN
600	0.47	34.0	18.0	12.0	7.5	117.5	8.0	20	250	1.0	FSC2KK474034XLLN
600	0.68	34.0	20.5	14.5	9.0	170.0	6.0	21	250	1.0	FSC2KK684034XLLN
600	1.00	34.0	23.5	17.5	10.0	250.0	6.0	23	250	1.0	FSC2KK105034XLLN
600	1.50	34.0	27.5	21.5	12.0	375.0	5.0	24	250	1.2	FSC2KK155034XLLN
600	2.00	46.0	27.5	18.5	13.0	400.0	5.0	28	200	1.2	FSC2KK205046XLLN
600	3.30	54.0	32.0	22.5	17.5	495.0	4.0	34	150	1.2	FSC2KK335054XLLN
600	4.70	54.0	33.5	28.5	19.0	705.0	4.0	36	150	1.2	FSC2KK475054XLLN
850	0.15	34.0	16.0	10.0	6.5	112.5	8.0	19	750	0.8	FSC2PK154034XLLN
850	0.22	34.0	18.0	11.5	7.0	165.0	8.0	20	750	1.0	FSC2PK224034XLLN
850	0.33	34.0	20.5	14.5	8.5	247.5	7.0	21	750	1.0	FSC2PK334034XLLN
850	0.47	34.0	23.5	17.0	11.0	352.5	5.0	22	750	1.0	FSC2PK474034XLLN
850	0.68	34.0	27.0	21.0	13.5	510.0	4.0	24	750	1.2	FSC2PK684034XLLN
850	1.00	46.0	27.0	17.5	13.0	450.0	5.0	28	450	1.2	FSC2PK105046XLLN
850	1.50	46.0	31.0	21.5	16.0	675.0	4.0	30	450	1.2	FSC2PK155046XLLN
850	2.00	46.0	34.5	25.0	20.0	900.0	3.0	31	450	1.2	FSC2PK205046XLLN
850	2.20	46.0	36.0	26.5	20.5	990.0	3.0	32	450	1.2	FSC2PK225046XLLN
850	2.50	46.0	38.0	28.5	21.5	1125.0	3.0	33	450	1.2	FSC2PK255046XLLN
1000	0.15	34.0	17.5	11.5	7.5	127.5	7.0	20	850	1.0	FSC3KK154034XLLN
1000	0.22	34.0	20.0	13.5	8.0	187.0	7.0	21	850	1.0	FSC3KK224034XLLN
1000	0.33	34.0	23.0	17.0	10.0	280.5	6.0	22	850	1.0	FSC3KK334034XLLN
1000	0.47	34.0	26.5	20.0	12.0	399.5	5.0	24	850	1.2	FSC3KK474034XLLN
1000	0.68	34.0	30.5	24.5	13.0	578.0	5.0	26	850	1.2	FSC3KK684034XLLN
1000	1.00	46.0	30.0	20.5	14.0	500.0	5.0	24	500	1.2	FSC3KK105046XLLN
1000	1.50	46.0	35.0	25.5	17.5	750.0	4.0	31	500	1.2	FSC3KK155046XLLN
1000	2.00	46.0	39.0	30.0	22.0	1000.0	3.0	33	500	1.2	FSC3KK205046XLLN
1200	0.10	34.0	18.0	12.0	7.0	115.0	9.0	20	1150	1.0	FSC3BK104034XLLN
1200	0.15	34.0	21.0	14.5	8.5	172.5	7.0	21	1150	1.0	FSC3BK154034XLLN
1200	0.22	34.0	24.0	17.5	9.5	253.0	7.0	23	1150	1.0	FSC3BK224034XLLN
1200	0.33	46.0	24.0	14.5	10.0	214.5	7.0	21	650	1.0	FSC3BK334046XLLN
1200	0.47	46.0	27.0	18.0	11.0	305.5	7.0	28	650	1.2	FSC3BK474046XLLN
1200	0.68	46.0	31.0	22.0	13.0	442.0	6.0	30	650	1.2	FSC3BK684046XLLN
1200	1.00	46.0	36.0	27.0	16.0	650.0	5.0	32	650	1.2	FSC3BK105046XLLN
1200	1.50	54.0	40.5	27.5	20.0	780.0	4.0	36	520	1.2	FSC3BK155054XLLN
1600	0.10	34.0	20.5	14.5	8.5	145.0	7.0	21	1450	1.0	FSC3WK104034XLLN
1600	0.15	34.0	24.0	18.0	11.0	217.5	5.0	23	1450	1.0	FSC3WK154034XLLN
1600	0.22	34.0	28.0	21.5	10.5	319.0	7.0	24	1450	1.2	FSC3WK224034XLLN
1600	0.33	46.0	27.5	18.5	11.0	264.0	7.0	23	800	1.2	FSC3WK334046XLLN
1600	0.47	46.0	31.5	22.0	13.0	376.0	6.0	30	800	1.2	FSC3WK474046XLLN
1600	0.68	46.0	36.5	27.0	14.5	544.0	6.0	32	800	1.2	FSC3WK684046XLLN
1600	1.00	46.0	42.5	33.0	18.0	800.0	5.0	35	800	1.2	FSC3WK105046XLLN
1600	1.50	54.0	47.0	34.5	22.5	975.0	4.0	39	650	1.2	FSC3WK155054XLLN

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

FSC series

Technical data

Vdc	Cap	Dimensions			Irms	Peak	$ESR_{Typical}$	ESL	dv/dt	Lead Wire	Part Number
	Value	L	H	T	100KHz	Current	100KHz				
	μF	mm max	mm max	mm max	70°C A	A	mΩ	nH	V/us	mm	
2000	0.022	34	14.5	8.0	3.0	38.5	35.0	18	1750	0.8	FSC3DK223034XLLN
2000	0.033	34	16.0	10.0	4.0	57.8	20.0	19	1750	0.8	FSC3DK333034XLLN
2000	0.047	34	18.0	11.5	6.0	82.3	12.0	20	1750	1.0	FSC3DK473034XLLN
2000	0.068	34	20.5	14.0	8.0	119.0	8.0	21	1750	1.0	FSC3DK683034XLLN
2000	0.10	34	23.5	17.0	9.0	175.0	7.0	22	1750	1.0	FSC3DK104034XLLN
2000	0.15	46	23.5	14.0	10.0	144.0	7.0	21	960	1.0	FSC3DK154046XLLN
2000	0.22	46	27.0	17.5	10.5	211.2	8.0	28	960	1.0	FSC3DK224046XLLN
2000	0.33	46	31.5	22.0	11.5	316.8	8.0	30	960	1.2	FSC3DK334046XLLN
2000	0.47	46	36.0	26.5	14.5	451.2	6.0	32	960	1.2	FSC3DK474046XLLN
2000	0.56	54	36.5	24.0	14.0	425.6	7.0	31	760	1.2	FSC3DK564054XLLN
2000	0.68	54	39.5	27.0	16.0	516.8	6.0	35	760	1.2	FSC3DK684054XLLN
2000	1.00	54	45.5	33.0	19.5	760.0	5.0	38	760	1.2	FSC3DK105054XLLN
3000	0.01	34	14.0	8.0	2.5	26.0	60.0	18	2600	0.8	FSC3FK103034XLLN
3000	0.015	34	16.0	9.5	3.0	39.0	40.0	19	2600	0.8	FSC3FK153034XLLN
3000	0.022	34	18.0	11.5	4.0	57.2	25.0	20	2600	1.0	FSC3FK223034XLLN
3000	0.033	34	20.5	14.5	6.0	85.8	14.0	21	2600	1.0	FSC3FK333034XLLN
3000	0.047	46	21.0	11.5	6.5	70.5	14.0	20	1500	1.0	FSC3FK473046XLLN
3000	0.068	46	23.5	14.0	7.5	102.0	12.0	26	1500	1.0	FSC3FK683046XLLN
3000	0.10	46	26.5	17.0	9.0	150.0	10.0	28	1500	1.2	FSC3FK104046XLLN
3000	0.15	46	31.0	21.5	11.5	225.0	8.0	30	1500	1.2	FSC3FK154046XLLN

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

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

- Widely used in high voltage, high frequency circuit.
- IGBT modules protection.

Features

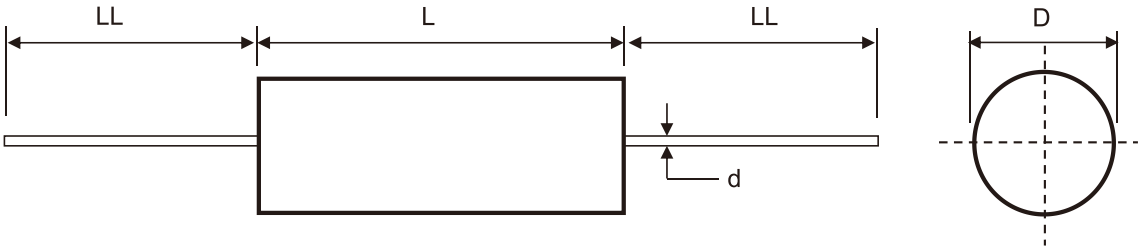
- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications

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 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 (△tgδ):≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±5% DF change (△tgδ):≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FSD series

Dimensions



Dimensions - Lead wires

D	L	d	LL
(mm) max	(mm) max	(mm) ±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

FSD series

Technical data

Vdc	Cap	Dimensions		Irms	Peak	$ESR_{Typical}$	ESL	dv/dt	Lead Wire	Part Number
	Value	D	L	100KHz	Current	100KHz				
	μF	mm max	mm max	70°C A	A	mΩ	nH	V/us	mm	
2000	0.047	14.0	34	5	56.4	30.0	26	1200	0.8	FSD3DK473034XLLN
2000	0.047	11.0	46	5	56.4	30.0	26	1200	0.8	FSD3DK473046XLLN
2000	0.068	16.0	34	7	136.0	16.8	22	2000	1.0	FSD3DK683034XLLN
2000	0.068	13.0	46	6	81.6	23.3	26	1200	1.0	FSD3DK683046XLLN
2000	0.10	19.0	34	10	200.0	12.0	22	2000	1.0	FSD3DK104034XLLN
2000	0.10	15.5	46	9	120.0	17.7	26	1200	1.0	FSD3DK104046XLLN
2000	0.15	18.5	46	12	180.0	9.5	26	1200	1.0	FSD3DK154046XLLN
2000	0.22	21.5	46	13	264.0	8.6	26	1200	1.0	FSD3DK224046XLLN
2000	0.33	26.5	46	14	396.0	6.7	26	1200	1.2	FSD3DK334046XLLN
2000	0.47	32.0	46	14	564.0	5.6	26	1200	1.2	FSD3DK474046XLLN
2000	0.56	34.5	46	15	672.0	5.2	26	1200	1.2	FSD3DK564046XLLN
2000	0.56	29.0	58	15	392.0	6.5	32	700	1.2	FSD3DK564058XLLN
2000	0.68	31.0	58	15	476.0	5.7	32	700	1.2	FSD3DK684058XLLN
2000	1.00	37.5	58	15	700.0	4.7	32	700	1.2	FSD3DK105058XLLN
2000	1.20	40.5	58	15	840.0	4.3	32	700	1.2	FSD3DK125058XLLN

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

FSD series

Technical data

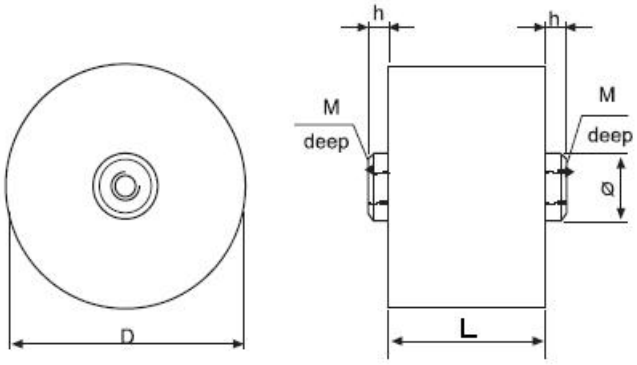
Vdc	Cap	Dimensions		Irms	Peak	$ESR_{Typical}$	ESL	dv/dt	Lead Wire	Part Number
	Value	D	L	100KHz	Current	100KHz				
	μF	mm max	mm max	70°C A	A	mΩ	nH	V/us	mm	
850	0.22	14.5	34	8	264	9.4	22	1200	1.0	FSD2PK224034XLLN
850	0.22	12.0	46	7	154	11.3	26	700	0.8	FSD2PK224046XLLN
850	0.33	17.5	34	9	396	8.8	22	1200	1.0	FSD2PK334034XLLN
850	0.33	14.0	46	10	231	8.7	26	700	1.0	FSD2PK334046XLLN
850	0.47	20.5	34	11	564	5.7	22	1200	1.0	FSD2PK474034XLLN
850	0.47	16.5	46	9	329	7.2	26	700	1.0	FSD2PK474046XLLN
850	0.68	19.5	46	13	476	4.6	26	700	1.0	FSD2PK684046XLLN
850	1.00	23.0	46	13	700	4.7	26	700	1.0	FSD2PK105046XLLN
850	1.50	28.5	46	13	1050	4.0	26	700	1.2	FSD2PK155046XLLN
850	2.00	32.0	46	13	1400	4.3	26	700	1.2	FSD2PK205046XLLN
850	2.20	33.5	46	14	1540	3.3	26	700	1.2	FSD2PK225046XLLN
850	2.20	28.5	58	12	990	4.0	32	450	1.2	FSD2PK225058XLLN
850	2.50	35.5	46	15	1750	3.7	26	700	1.2	FSD2PK255046XLLN
850	2.50	30.0	58	15	1125	4.0	32	450	1.2	FSD2PK255058XLLN
850	3.00	32.5	58	15	1350	3.7	32	450	1.2	FSD2PK305058XLLN
850	3.30	34.0	58	15	1485	3.3	32	450	1.2	FSD2PK335058XLLN
850	4.00	37.5	58	15	1800	3.3	32	450	1.2	FSD2PK405058XLLN
850	4.70	40.0	58	15	2115	2.9	32	450	1.2	FSD2PK475058XLLN
1000	0.22	16.5	34	8	286	8.5	22	1300	1.0	FSD3KK224034XLLN
1000	0.33	20.0	34	9	429	6.5	22	1300	1.0	FSD3KK334034XLLN
1000	0.33	16.0	46	8	264	8.3	26	800	1.0	FSD3KK334046XLLN
1000	0.47	23.5	34	10	611	5.4	22	1300	1.0	FSD3KK474034XLLN
1000	0.47	18.5	46	9	376	6.7	26	800	1.0	FSD3KK474046XLLN
1000	0.68	22.0	46	12	544	5.7	26	800	1.0	FSD3KK684046XLLN
1000	1.00	26.5	46	12	800	4.6	26	800	1.2	FSD3KK105046XLLN
1000	1.50	32.0	46	13	1200	5.2	26	800	1.2	FSD3KK155046XLLN
1000	1.50	27.0	58	12	750	5.6	32	500	1.2	FSD3KK155058XLLN
1000	2.00	31.0	58	15	1000	4.3	32	500	1.2	FSD3KK205058XLLN
1000	2.20	32.0	58	15	1100	3.9	32	500	1.2	FSD3KK225058XLLN
1000	3.00	37.5	58	15	1500	3.4	32	500	1.2	FSD3KK305058XLLN
1000	3.30	39.0	58	15	1650	3.1	32	500	1.2	FSD3KK335058XLLN
1200	0.22	18.0	34	9	330	7.7	22	1500	1.0	FSD3BK224034XLLN
1200	0.22	14.5	46	8	198	11.0	26	900	1.0	FSD3BK224046XLLN
1200	0.33	22.0	34	10	495	6.6	22	1500	1.0	FSD3BK3340434XLLN
1200	0.33	17.5	46	9	297	7.7	26	900	1.0	FSD3BK334046XLLN
1200	0.47	24.0	46	10	423	6.8	26	900	1.2	FSD3BK474046XLLN
1200	0.68	26.0	46	12	612	5.8	26	900	1.2	FSD3BK684046XLLN
1200	1.00	29.0	46	11	900	5.0	26	900	1.2	FSD3BK105046XLLN
1200	1.00	24.5	58	10	550	5.5	32	550	1.2	FSD3BK105058XLLN
1200	1.20	32.0	46	11	1080	4.4	26	900	1.2	FSD3BK125046XLLN
1200	1.20	26.5	58	10	660	4.8	32	550	1.2	FSD3BK125058XLLN
1200	1.50	35.5	46	14	1350	3.9	26	900	1.2	FSD3BK155046XLLN
1200	1.50	29.5	58	13	825	4.4	32	550	1.2	FSD3BK155058XLLN
1200	2.00	33.0	58	15	1100	3.9	32	550	1.2	FSD3BK205058XLLN
1200	2.20	35.5	58	15	1210	3.7	32	550	1.2	FSD3BK225058XLLN
1200	3.00	41.0	58	15	1650	3.1	32	550	1.2	FSD3BK305058XLLN

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

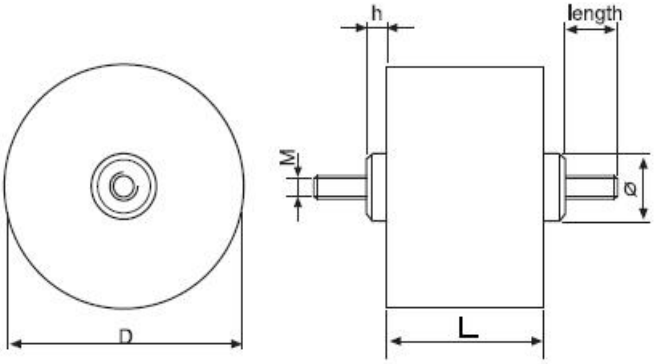
FSE series

Dimensions

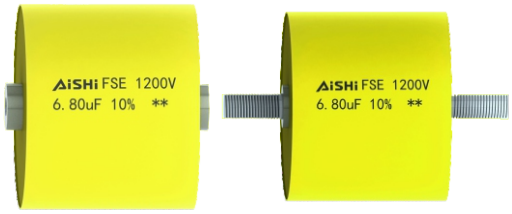
Female type



Male type



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

- Widely used in high voltage, high frequency circuit.
- GTO modules protection.

Features

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

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 Voltagge	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 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 (△tgδ):≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤20 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

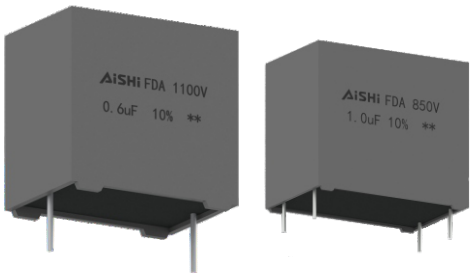
FSE series

Technical data

Vdc	Cap	Dimensions		Irms	Peak	$ESR_{Typical}$	Rth	dv/dt	output	Part Number
	Value	D	L	100KHz	Current	100KHz				
	μF	mm max	mm max	70°C A	A	mΩ	k/W	V/us		
1000	1.50	45.0	37	43	825	1.0	11	550	M6*8	FSE3KJ155037FN65
1000	3.00	56.0	40	55	1500	0.8	7.4	500	M6*8	FSE3KJ305040FN65
1000	4.00	65.0	40	65	2000	0.8	6	500	M6*8	FSE3KJ405040FN65
1000	5.00	72.0	40	70	2500	0.7	5	500	M8*8	FSE3KJ505040FN85
1000	6.00	78.0	40	80	3000	0.7	4.5	500	M8*8	FSE3KJ605040FN85
1000	7.00	84.0	40	85	3500	0.6	4	500	M8*8	FSE3KJ705040FN85
1000	8.00	75.0	50	85	3600	0.6	4	450	M8*8	FSE3KJ805050FN85
1000	10.00	86.0	50	88	4500	0.7	3.5	450	M8*8	FSE3KJ106050FN85
1000	12.00	86.0	50	95	5400	0.7	3.5	450	M8*8	FSE3KJ126050FN85
1200	1.00	45.0	37	40	700	1.2	11.5	700	M6*8	FSE3BJ105037FN65
1200	2.00	52.0	40	45	1200	1.0	8.5	600	M6*8	FSE3BJ205040FN65
1200	3.00	62.0	40	60	1800	0.8	6.5	600	M6*8	FSE3BJ305040FN65
1200	4.00	72.0	40	70	2400	0.7	5	600	M8*8	FSE3BJ405040FN85
1200	5.00	80.0	40	80	3000	0.7	4.5	600	M8*8	FSE3BJ505040FN85
1200	6.00	86.0	40	85	3600	0.7	4	600	M8*8	FSE3BJ605040FN85
1200	8.00	86.0	50	90	4000	0.7	3.8	500	M8*8	FSE3BJ805050FN85
1200	10.00	86.0	50	95	5000	0.7	3.5	500	M8*8	FSE3BJ106050FN85
2000	0.50	45.0	37	35	600	1.5	12	1200	M6*8	FSE3DJ504037FN65
2000	1.00	56.0	40	50	1200	1.2	7.5	1200	M6*8	FSE3DJ105040FN65
2000	1.50	68.0	40	60	1800	1.0	5.5	1200	M6*8	FSE3DJ155040FN65
2000	2.00	78.0	40	75	2400	0.9	4.5	1200	M8*8	FSE3DJ205040FN85
2000	2.50	88.0	40	80	3000	0.8	4	1200	M8*8	FSE3DJ255040FN85
2000	3.00	82.0	50	80	2550	0.8	4	850	M8*8	FSE3DJ305050FN85
2000	4.00	86.0	50	85	3400	0.8	3.5	850	M8*8	FSE3DJ405050FN85
3000	0.68	50.0	50	35	816	2.5	12	1200	M6*8	FSE3FJ684037FN65
3000	0.75	52.0	50	45	900	2.0	7.5	1200	M6*8	FSE3FJ754050FN65
3000	1.00	60.0	50	50	1200	1.5	5.5	1200	M6*8	FSE3FJ105050FN65
3000	1.20	67.0	50	60	1440	1.4	4.5	1200	M8*8	FSE3FJ125050FN85
3000	1.50	73.0	50	65	1800	1.2	4	1200	M8*8	FSE3FJ155050FN85
3000	2.00	85.0	50	70	2400	1.0	4	1200	M8*8	FSE3FJ205050FN85
3000	2.50	93.0	50	85	3000	0.9	3.5	1200	M8*8	FSE3FJ255050FN85
3000	0.68	38.0	64	30	578	4.0	14.5	850	M6*8	FSE3FJ684064FN85
3000	1.00	45.0	64	40	850	3.0	8.5	850	M6*8	FSE3FJ105064FN85
3000	1.50	55.0	64	55	1275	2.0	6.5	850	M6*8	FSE3FJ155064FN85
3000	2.00	63.0	64	60	1700	1.5	5.5	850	M8*8	FSE3FJ205064FN85
3000	2.50	70.0	64	70	2125	1.4	5	850	M8*8	FSE3FJ255064FN85
3000	3.00	76.0	64	85	2550	1.2	4	850	M8*8	FSE3FJ305064FN85

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

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

- High performance DC filtering applications.
- Frequency converters, industrial and high-end power supplies and solar inverter.

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≤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 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 (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FDA series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
450	1.0	32.0	18.0	9.0	27.5	\	2.5	60	45.0	25	51.7	60	0.8	FDA2WK105G++2GL5
450	2.0	32.0	18.0	9.0	27.5	\	3.0	120	30.0	25	50.5	60	0.8	FDA2WK205G++2GL5
450	3.0	32.0	20.0	11.0	27.5	\	4.0	180	20.0	25	49.3	60	0.8	FDA2WK305G++2GL5
450	4.0	32.0	20.0	11.0	27.5	\	4.0	240	18.0	25	48.4	60	0.8	FDA2WK405G++2GL5
450	5.0	32.0	20.0	11.0	27.5	\	5.0	300	12.0	25	47.1	60	0.8	FDA2WK505G++2GL5
450	5.0	32.0	22.0	13.0	27.5	\	5.5	300	11.0	25	46.5	60	0.8	FDA2WJ505G++2GL5
450	10.0	32.0	28.0	14.0	27.5	\	7.5	600	8.5	25	23.7	60	0.8	FDA2WK106G++2GL5
450	10.0	32.0	28.0	18.0	27.5	\	9.0	600	8.0	25	23.7	60	0.8	FDA2WJ106G++2GL5
450	12.0	32.0	33.0	18.0	27.5	\	10.0	720	7.0	25	20.5	60	0.8	FDA2WK126G++2GL5
450	15.0	32.0	37.0	22.0	27.5	\	11.5	900	6.0	25	14.5	60	0.8	FDA2WK156G++2GL5
450	15.0	42.5	18.0	24.0	37.5	\	9.5	450	8.5	25	15.5	30	1.0	FDA2WK156K++2KL5
450	18.0	32.0	37.0	22.0	27.5	\	10.0	1080	6.0	28	13.8	60	0.8	FDA2WK186G++2GL5
450	20.0	32.0	37.0	22.0	27.5	\	11.0	1200	5.0	28	12.8	60	0.8	FDA2WK206G++2GL5
450	22.0	32.0	37.0	22.0	27.5	\	12.5	1320	5.0	28	12.8	60	0.8	FDA2WK226G++2GL5
450	25.0	42.5	37.0	22.0	37.5	10.2	12.5	875	5.5	30	12.3	35	1.2	FDA2WK256K++4KB5
450	30.0	42.5	40.0	20.0	37.5	10.2	12.0	1050	6.0	30	11.6	35	1.2	FDA2WK306K++4KB5
450	40.0	42.5	37.0	28.0	37.5	10.2	14.0	1400	5.5	30	9.3	35	1.2	FDA2WJ406K++4KB5
450	40.0	42.5	44.0	24.0	37.5	10.2	15.0	1400	5.2	30	9.0	35	1.2	FDA2WK406K++4KB5
450	40.0	57.5	22.0	43.0	52.5	20.3	12.0	1400	8.0	30	9.5	35	1.2	FDA2WK406M++4MD5
450	50.0	42.5	45.0	30.0	37.5	20.3	15.0	1750	4.0	30	11.1	35	1.2	FDA2WK506K++4KD5
450	50.0	57.5	22.0	43.0	52.5	20.3	14.0	1750	6.5	30	9.5	35	1.2	FDA2WK506M++4MD5
450	55.0	57.5	45.0	30.0	37.5	20.3	15.5	1925	5.0	30	9.8	35	1.2	FDA2WK556M++4MD5
450	60.0	57.5	45.0	30.0	37.5	20.3	16.5	2100	4.5	30	9.2	35	1.2	FDA2WK606M++4MD5
450	60.0	42.5	45.0	30.0	37.5	20.3	16.5	2100	4.0	30	8.6	35	1.2	FDA2WK606K++4KD5
450	80.0	57.5	45.0	30.0	52.5	20.3	16.0	1600	4.0	35	7.4	20	1.2	FDA2WK806M++4MD5
450	100.0	57.5	50.0	35.0	52.5	20.3	18.0	2000	3.8	35	6.2	20	1.2	FDA2WK107M++4MD5
450	130.0	57.5	60.0	35.0	52.5	20.3	22.0	2600	3.5	35	5.5	20	1.2	FDA2WK137M++4MD5
450	140.0	57.5	65.0	35.0	52.5	20.3	24.0	2800	3.4	35	5.4	20	1.2	FDA2WK147M++4MD5
450	150.0	57.5	70.0	35.0	52.5	20.3	26.0	3000	3.2	35	5.2	20	1.2	FDA2WK157M++4MD5
450	160.0	57.5	80.0	35.0	52.5	20.3	28.0	3200	3.1	35	5.0	20	1.2	FDA2WK167M++4MD5
450	170.0	57.5	80.0	35.0	52.5	20.3	30.0	3400	3.0	35	4.8	20	1.2	FDA2WK177M++4MD5
550	3.0	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDA2JK305G++2GL5
550	5.0	32.0	22.0	13.0	27.5	\	6.0	300	14.0	25	16.8	60	0.8	FDA2JK505G++2GL5
550	8.0	32.0	28.0	14.0	27.5	\	8.5	480	12.5	25	12.6	60	0.8	FDA2JK805G++2GL5
550	10.0	32.0	33.0	18.0	27.5	\	10.0	600	8.0	25	12.5	60	0.8	FDA2JK106G++2GL5
550	15.0	32.0	37.0	22.0	27.5	\	12.0	900	6.5	28	9.1	60	0.8	FDA2JK156G++2GL5
550	15.0	32.0	37.0	22.0	27.5	10.2	13.0	900	5.5	28	8.1	60	1.2	FDA2JK156G++4GB5
550	15.0	42.5	18.0	24.0	37.5	\	10.5	900	6.5	28	8.3	60	1.0	FDA2JK156K++2KL5
550	20.0	42.5	40.0	20.0	37.5	10.2	12.5	700	6.5	30	9.8	35	1.2	FDA2JK206K++4KB5
550	22.0	42.5	40.0	20.0	37.5	10.2	13.5	770	6.5	30	8.4	35	1.2	FDA2JK226K++4KB5
550	25.0	42.5	40.0	20.0	37.5	10.2	14.5	875	6.5	30	7.3	35	1.2	FDA2JK256K++4KB5
550	30.0	42.5	44.0	24.0	37.5	10.2	16.0	1050	6.0	30	6.5	35	1.2	FDA2JK306K++4KB5
550	35.0	42.5	45.0	30.0	37.5	20.3	18.0	1225	6.0	30	5.1	35	1.2	FDA2JK356K++4KD5
550	40.0	42.5	45.0	30.0	37.5	20.3	18.0	1400	5.5	30	5.1	35	1.2	FDA2JK406K++4KD5
550	40.0	57.5	22.0	43.0	57.5	20.3	16.0	1400	5.8	30	5.2	35	1.2	FDA2JK406M++4MD5
550	50.0	42.5	50.0	35.0	37.5	20.3	20.0	1750	5.0	30	5.0	35	1.2	FDA2JK506K++4KD5
550	60.0	57.5	45.0	30.0	37.5	20.3	18.0	1200	4.8	35	6.2	20	1.2	FDA2JK606M++4MD5
550	75.0	57.5	50.0	35.0	52.5	20.3	20.0	1500	5.0	35	5.0	20	1.2	FDA2JK756M++4MD5
550	100.0	57.5	55.0	45.0	52.5	20.3	24.0	2000	4.5	35	3.9	20	1.2	FDA2JK107M++4MD5
550	110.0	57.5	55.0	45.0	52.5	20.3	26.0	2200	4.0	35	3.7	20	1.2	FDA2JK117M++4MD5
550	130.0	57.5	60.0	35.0	52.5	20.3	23.0	2600	3.4	35	5.4	20	1.2	FDA2JK137M++4MD5
550	140.0	57.5	65.0	35.0	52.5	20.3	25.0	2800	3.3	35	5.3	20	1.2	FDA2JK147M++4MD5
550	150.0	57.5	70.0	35.0	52.5	20.3	27.0	3000	3.1	35	5.0	20	1.2	FDA2JK157M++4MD5
550	160.0	57.5	80.0	35.0	52.5	20.3	29.0	3200	3.0	35	4.8	20	1.2	FDA2JK167M++4MD5
550	170.0	57.5	80.0	35.0	52.5	20.3	32.0	3400	2.8	35	4.7	20	1.2	FDA2JK177M++4MD5

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

FDA series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
600	3.0	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDA2KK305G++2GL5
600	4.0	32.0	20.0	11.0	27.5	\	5.0	240	26.0	25	14.3	60	0.8	FDA2KK405G++2GL5
600	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.5	25	26.5	60	0.8	FDA2KK505G++2GL5
600	8.0	32.0	28.0	14.0	27.5	\	7.5	480	12.0	25	17.8	60	0.8	FDA2KK805G++2GL5
600	10.0	32.0	33.0	18.0	27.5	\	8.5	600	7.5	25	19.8	60	0.8	FDA2KK106G++2GL5
600	12.0	32.0	33.0	18.0	27.5	\	9.5	720	7.5	25	15.8	60	0.8	FDA2KK126G++2GL5
600	12.0	42.5	18.0	24.0	37.5	\	8.0	420	9.5	25	16.8	35	1.0	FDA2KK126K++2KL5
600	15.0	32.0	37.0	22.0	27.5	\	10.5	900	7.5	28	12.1	60	0.8	FDA2KK156G++2GL5
600	15.0	42.5	18.0	24.0	37.5	\	12.0	525	6.0	28	16.2	35	1.0	FDA2KK156K++2KL5
600	20.0	42.5	40.0	20.0	37.5	10.2	11.0	700	6.0	30	13.8	35	1.2	FDA2KK206K++4KB5
600	30.0	42.5	37.0	28.0	37.5	10.2	13.0	1050	5.5	30	10.8	35	1.2	FDA2KK306K++4KB5
600	35.0	42.5	44.0	24.0	37.5	10.2	16.5	1225	5.0	30	8.5	35	1.2	FDA2KK356K++4KB5
600	35.0	57.5	22.0	43.0	52.5	20.3	13.5	700	5.5	30	10.7	20	1.2	FDA2KK356M++4MD5
600	40.0	42.5	45.0	30.0	37.5	20.3	18.0	1400	4.0	30	7.7	35	1.2	FDA2KK406K++4KD5
600	50.0	57.5	50.0	35.0	52.5	20.3	14.0	1000	6.5	35	7.8	20	1.2	FDA2KK506M++4MD5
600	60.0	57.5	50.0	35.0	52.5	20.3	16.0	1200	5.0	35	7.8	20	1.2	FDA2KK606M++4MD5
600	70.0	57.5	50.0	35.0	52.5	20.3	18.0	1400	5.0	35	6.2	20	1.2	FDA2KK706M++4MD5
600	80.0	57.5	55.0	45.0	52.5	20.3	20.0	1600	4.0	35	6.3	20	1.2	FDA2KK806M++4MD5
600	90.0	57.5	55.0	45.0	52.5	20.3	24.0	1800	4.0	35	4.3	20	1.2	FDA2KK906M++4MD5
600	100	57.5	53.0	50.0	52.5	20.3	26.0	2000	4.0	35	3.7	20	1.2	FDA2KK107M++4MD5
600	110	57.5	53.0	50.0	52.5	20.3	28.0	2200	3.5	35	3.6	20	1.2	FDA2KK117M++4MD5
600	120	57.5	60.0	35.0	52.5	20.3	30.0	2400	3.4	35	3.5	20	1.2	FDA2KK127M++4MD5
600	130	57.5	65.0	35.0	52.5	20.3	32.0	2600	3.3	35	3.4	20	1.2	FDA2KK137M++4MD5
600	140	57.5	70.0	35.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDA2KK147M++4MD5
600	140	57.5	65.0	45.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDA2KJ147M++4MD5
600	150	57.5	80.0	35.0	52.5	20.3	36.0	3000	3.0	35	3.3	20	1.2	FDA2KK157M++4MD5
700	1.0	32.0	18.0	9.0	27.5	\	2.5	60	54.0	25	50.6	60	0.8	FDA2MK105G++2GL5
700	2.0	32.0	18.0	9.0	27.5	\	3.0	120	35.0	25	49.5	60	0.8	FDA2MK205G++2GL5
700	3.0	32.0	20.0	11.0	27.5	\	4.5	180	28.0	25	47.0	60	0.8	FDA2MK305G++2GL5
700	3.3	32.0	28.0	14.0	27.5	\	5.5	198	26.0	25	31.5	60	0.8	FDA2MK335G++2GL5
700	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.0	25	26.5	60	0.8	FDA2MK505G++2GL5
700	6.0	32.0	28.0	18.0	27.5	\	6.0	360	14.0	25	16.9	60	0.8	FDA2MK605G++2GL5
700	8.0	32.0	33.0	18.0	27.5	\	9.0	480	10.0	25	12.3	60	0.8	FDA2MK805G++2GL5
700	10.0	32.0	33.0	18.0	27.5	\	10.0	600	7.0	25	14.3	60	0.8	FDA2MJ106G++2GL5
700	10.0	32.0	37.0	22.0	27.5	\	12.0	600	6.5	28	10.7	60	0.8	FDA2MK106G++2GL5
700	10.0	42.5	18.0	24.0	37.5	\	11.5	350	7.5	30	10.1	35	1.0	FDA2MK106K++2KL5
700	12.0	32.0	37.0	22.0	27.5	\	12.5	720	6.0	28	9.2	60	0.8	FDA2MK126G++2GL5
700	12.0	42.5	18.0	24.0	37.5	\	12.0	420	7.0	30	9.8	35	1.0	FDA2MK126K++2KL5
700	15.0	42.5	33.5	22.0	37.5	\	9.0	525	9.0	30	13.7	35	1.0	FDA2MK156K++2KL5
700	15.0	42.5	33.5	22.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDA2MK156K++4KB5
700	15.0	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDA2MJ156K++4KB5
700	20.0	42.5	37.0	28.0	37.5	10.2	12.0	700	7.5	30	11.6	35	1.2	FDA2MK206K++4KB5
700	22.0	42.5	44.0	24.0	37.5	10.2	14.0	770	6.5	30	9.3	35	1.2	FDA2MK226K++4KB5
700	25.0	42.5	44.0	24.0	37.5	10.2	16.0	875	6.0	30	7.8	35	1.2	FDA2MK256K++4KB5
700	30.0	42.5	45.0	30.0	37.5	20.3	16.0	1050	5.8	30	8.7	35	1.2	FDA2MK306K++4KD5
700	30.0	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	9.8	20	1.2	FDA2MK306M++4MD5
700	35.0	42.5	50.0	35.0	37.5	20.3	20.0	1225	5.5	30	6.3	35	1.2	FDA2MK356K++4KD5
700	40.0	57.5	45.0	30.0	52.5	20.3	14.0	800	5.0	35	8.5	20	1.2	FDA2MK406M++4MD5
700	45.0	57.5	45.0	30.0	52.5	20.3	15.5	900	5.0	35	7.6	20	1.2	FDA2MK456M++4MD5
700	50.0	57.5	50.0	35.0	52.5	20.3	15.0	1000	4.8	35	8.1	20	1.2	FDA2MK506M++4MD5
700	55.0	57.5	50.0	35.0	52.5	20.3	16.0	1100	4.5	35	8.7	20	1.2	FDA2MK556M++4MD5
700	60.0	57.5	50.0	35.0	52.5	20.3	18.0	1200	4.0	35	7.7	20	1.2	FDA2MK606M++4MD5
700	65.0	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDA2MK656M++4MD5
700	70.0	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDA2MK706M++4MD5
700	75.0	57.5	55.0	45.0	52.5	20.3	20.0	1500	3.8	35	6.3	20	1.2	FDA2MK756M++4MD5
700	80.0	57.5	55.0	45.0	52.5	20.3	22.0	1600	3.5	35	5.9	20	1.2	FDA2MJ806M++4MD5
700	80.0	57.5	60.0	35.0	52.5	20.3	23.0	1600	3.4	35	5.8	20	1.2	FDA2MK806M++4MD5
700	90.0	57.5	55.0	45.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDA2MJ906M++4MD5

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

FDA series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	Number
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
700	90.0	57.5	60.0	35.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDA2MK906M++4MD5
700	100	57.5	65.0	35.0	52.5	20.3	26.0	2000	3.5	35	5.9	20	1.2	FDA2MK107M++4MD5
700	110	57.5	70.0	35.0	52.5	20.3	28.0	2200	3.4	35	5.8	20	1.2	FDA2MK117M++4MD5
700	120	57.5	80.0	35.0	52.5	20.3	30.0	2400	3.0	35	5.6	20	1.2	FDA2MK127M++4MD5
700	130	57.5	65.0	45.0	52.5	20.3	32.0	2600	2.8	35	5.4	20	1.2	FDA2MK137M++4MD5
800	1.0	32.0	18.0	9.0	27.5	\	2.0	60	62.0	25	45.7	60	0.8	FDA2NK105G++2GL5
800	2.0	32.0	20.0	11.0	27.5	\	3.5	120	31.0	25	42.5	60	0.8	FDA2NK205G++2GL5
800	3.0	32.0	22.0	13.0	27.5	\	4.5	180	21.0	25	35.4	60	0.8	FDA2NK305G++2GL5
800	3.3	32.0	28.0	14.0	27.5	\	4.0	198	25.0	25	32.1	60	0.8	FDA2NK335G++2GL5
800	5.0	32.0	28.0	14.0	27.5	\	6.0	300	12.0	25	26.5	60	0.8	FDA2NK505G++2GL5
800	6.0	32.0	28.0	18.0	27.5	\	7.5	360	10.5	25	18.6	60	0.8	FDA2NK605G++2GL5
800	8.0	32.0	33.0	18.0	27.5	\	9.5	480	9.5	25	14.3	60	0.8	FDA2NK805G++2GL5
800	9.0	32.0	33.0	18.0	27.5	\	10.0	540	8.5	25	9.1	60	0.8	FDA2NK905G++2GL5
800	10.0	32.0	37.0	22.0	27.5	\	11.5	600	9.5	28	8.0	60	0.8	FDA2NK106G++2GL5
800	10.0	42.5	32.0	19.0	37.5	\	8.0	350	12.5	30	15.8	35	1.2	FDA2NK106K++2KL5
800	15.0	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDA2NK156K++4KB5
800	20.0	42.5	37.0	28.0	37.5	10.2	12.0	700	7.0	30	11.6	35	1.2	FDA2NK206K++4KB5
800	20.0	42.5	44.0	24.0	37.5	10.2	13.5	700	6.5	30	11.8	35	1.2	FDA2NJ206K++4KB5
800	22.0	42.5	44.0	24.0	37.5	10.2	14.0	770	6.0	30	9.3	35	1.2	FDA2NK226K++4KB5
800	25.0	42.5	45.0	30.0	37.5	20.3	14.0	875	5.5	30	7.5	35	1.2	FDA2NK256K++4KD5
800	30.0	42.5	45.0	30.0	37.5	20.3	16.0	1050	4.5	30	8.7	35	1.2	FDA2NK306K++4KD5
800	35.0	57.5	45.0	30.0	52.5	20.3	14.2	700	6.5	35	7.6	20	1.2	FDA2NK356M++4MD5
800	40.0	57.5	45.0	30.0	52.5	20.3	14.0	800	6.0	35	8.5	20	1.2	FDA2NK406M++4MD5
800	45.0	57.5	45.0	30.0	52.5	20.3	15.5	900	5.5	35	7.6	20	1.2	FDA2NK456M++4MD5
800	47.0	57.5	50.0	35.0	52.5	20.3	17.5	940	5.0	35	6.5	20	1.2	FDA2NK476M++4MD5
800	50.0	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	20	1.2	FDA2NK506M++4MD5
800	55.0	57.5	50.0	35.0	52.5	20.3	17.0	1100	4.6	35	6.9	20	1.2	FDA2NK556M++4MD5
800	65.0	57.5	60.0	35.0	52.5	20.3	19.0	1300	4.0	35	7.3	20	1.2	FDA2NK656M++4MD5
800	65.0	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDA2NJ656M++4MD5
800	70.0	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDA2NJ706M++4MD5
800	70.0	57.5	60.0	35.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDA2NK706M++4MD5
800	75.0	57.5	55.0	45.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDA2NJ756M++4MD5
800	75.0	57.5	65.0	35.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDA2NK756M++4MD5
800	80.0	57.5	65.0	45.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDA2NJ806M++4MD5
800	80.0	57.5	70.0	35.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDA2NK806M++4MD5
800	90.0	57.5	65.0	45.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDA2NJ906M++4MD5
800	90.0	57.5	80.0	35.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDA2NK906M++4MD5
800	100.0	57.5	65.0	45.0	52.5	20.3	28.0	2000	3.2	35	4.8	20	1.2	FDA2NK107M++4MD5
900	1.0	32.0	18.0	9.0	27.5	\	2.0	60	63.0	25	46.8	60	0.8	FDA2QK105G++2GL5
900	2.0	32.0	20.0	11.0	27.5	\	3.0	120	25.0	25	44.4	60	0.8	FDA2QK205G++2GL5
900	3.0	32.0	22.0	13.0	27.5	\	5.0	180	18.5	25	21.6	60	0.8	FDA2QK305G++2GL5
900	3.3	32.0	24.5	15.0	27.5	\	5.0	198	18.5	25	21.6	60	0.8	FDA2QK335G++2GL5
900	5.0	32.0	28.0	18.0	27.5	\	7.0	300	12.5	25	16.3	60	0.8	FDA2QK505G++2GL5
900	6.0	32.0	33.0	18.0	27.5	\	8.0	360	11.0	25	14.2	60	0.8	FDA2QK605G++2GL5
900	8.0	32.0	37.0	22.0	27.5	\	10.5	480	10.0	28	9.1	60	0.8	FDA2QK805G++2GL5
900	10.0	32.0	37.0	22.0	27.5	\	12.0	600	10.0	28	6.9	60	0.8	FDA2QK106G++2GL5
900	10.0	42.5	40.0	20.0	37.5	\	8.5	350	12.0	30	11.5	35	1.0	FDA2QK106K++2KL5
900	10.0	42.5	40.0	20.0	37.5	10.2	9.5	350	11.5	30	9.6	35	1.2	FDA2QK106K++4KB5
900	15.0	42.5	44.0	24.0	37.5	\	10.5	525	8.0	30	11.3	35	1.0	FDA2QK156K++2KL5
900	15.0	42.5	44.0	24.0	37.5	10.2	12.0	525	7.5	30	9.3	35	1.2	FDA2QK156K++4KB5
900	18.0	42.5	44.0	24.0	37.5	\	10.5	630	8.0	30	11.3	35	1.0	FDA2QK186K++2KL5
900	18.0	42.5	44.0	24.0	37.5	10.2	12.0	630	7.5	30	9.3	35	1.2	FDA2QK186K++4KB5
900	20.0	42.5	45.0	30.0	37.5	\	14.0	700	6.0	30	8.5	35	1.0	FDA2QK206K++2KL5
900	20.0	42.5	45.0	30.0	37.5	20.3	15.0	700	5.5	30	8.1	35	1.2	FDA2QK206K++4KD5
900	20.0	57.5	22.0	43.0	52.5	20.3	12.0	400	8.6	30	10.5	20	1.2	FDA2QK206M++4MD5
900	25.0	42.5	45.0	30.0	37.5	20.3	17.0	875	5.5	30	6.3	35	1.2	FDA2QK256K++4KD5
900	30.0	42.5	50.0	35.0	37.5	20.3	19.0	1050	5.0	30	5.5	35	1.2	FDA2QK306K++4KD5
900	30 0	57 5	45 0	30 0	52 5	20 3	15 0	600	5 5	35	8 1	20	1 2	FDA2QK306M++4MD5

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

FDA series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
900	35.0	57.5	50.0	35.0	52.5	20.3	15.5	700	5.5	35	7.6	20	1.2	FDA2QK356M++4MD5
900	40.0	57.5	50.0	35.0	52.5	20.3	16.0	800	6.5	35	6.0	20	1.2	FDA2QK406M++4MD5
900	50.0	57.5	50.0	35.0	52.5	20.3	18.0	1000	3.6	35	8.6	20	1.2	FDA2QK506M++4MD5
900	55.0	57.5	60.0	35.0	52.5	20.3	19.0	1100	3.5	35	7.9	20	1.2	FDA2QK556M++4MD5
900	55.0	57.5	55.0	45.0	52.5	20.3	20.0	1100	3.4	35	7.4	20	1.2	FDA2QJ556M++4MD5
900	60.0	57.5	55.0	45.0	52.5	20.3	20.0	1200	3.4	35	7.4	20	1.2	FDA2QK606M++4MD5
900	65.0	57.5	70.0	35.0	52.5	20.3	22.0	1300	3.3	35	7.0	20	1.2	FDA2QK656M++4MD5
900	70.0	57.5	55.0	45.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDA2QK706M++4MD5
900	70.0	57.5	80.0	35.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDA2QK706M++4MD5
900	80.0	57.5	65.0	45.0	52.5	20.3	25.0	1600	3.2	35	6.7	20	1.2	FDA2QK806M++4MD5
1000	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDA3KK105G++2GL5
1000	2.0	32.0	22.0	13.0	27.5	\	3.5	160	30.0	25	27.2	80	0.8	FDA3KK205G++2GL5
1000	3.0	32.0	24.5	15.0	27.5	\	5.0	240	25.0	25	16.0	80	0.8	FDA3KK305G++2GL5
1000	5.0	32.0	33.0	18.0	27.5	\	8.0	400	14.0	25	11.2	80	0.8	FDA3KK505G++2GL5
1000	8.0	32.0	37.0	22.0	27.5	\	10.0	640	12.0	28	8.3	80	0.8	FDA3KK805G++2GL5
1000	10.0	42.5	40.0	20.0	37.5	\	8.5	400	12.0	30	11.5	40	1.0	FDA3KK106K++2KL5
1000	10.0	42.5	40.0	20.0	37.5	10.2	9.5	400	11.5	30	9.6	40	1.2	FDA3KK106K++4KB5
1000	12.0	42.5	44.0	24.0	37.5	10.2	10.5	480	9.0	30	10.1	40	1.2	FDA3KK126K++4KB5
1000	15.0	42.5	44.0	24.0	37.5	\	10.5	600	8.0	30	11.3	40	1.0	FDA3KK156K++2KL5
1000	15.0	42.5	44.0	24.0	37.5	10.2	12.0	600	7.5	30	9.3	40	1.2	FDA3KK156K++4KB5
1000	15.0	42.5	45.0	30.0	37.5	20.3	14.0	600	7.5	30	6.8	40	1.2	FDA3KK156K++4KD5
1000	15.0	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	7.9	40	1.2	FDA3KK156M++4MD5
1000	20.0	42.5	45.0	30.0	37.5	20.3	15.0	800	6.5	30	6.8	40	1.2	FDA3KK206K++4KD5
1000	25.0	42.5	50.0	35.0	37.5	20.3	18.0	1000	5.5	30	5.6	40	1.2	FDA3KK256K++4KD5
1000	30.0	57.5	45.0	30.0	52.5	20.3	15.0	750	5.5	35	8.1	25	1.2	FDA3KK306M++4MD5
1000	35.0	57.5	50.0	35.0	52.5	20.3	16.0	875	5.5	35	7.1	25	1.2	FDA3KK356M++4MD5
1000	40.0	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	25	1.2	FDA3KK406M++4MD5
1000	40.0	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.0	35	7.6	25	1.2	FDA3KJ406M++4MD5
1000	50.0	57.5	55.0	45.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDA3KJ506M++4MD5
1000	50.0	57.5	65.0	35.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDA3KK506M++4MD5
1000	55.0	57.5	70.0	35.0	52.5	20.3	20.0	1375	4.4	35	6.1	25	1.2	FDA3KK556M++4MD5
1000	60.0	57.5	80.0	35.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDA3KJ606M++4MD5
1000	60.0	57.5	65.0	45.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDA3KK606M++4MD5
1100	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDA3MK105G++2GL5
1100	1.5	32.0	22.0	13.0	27.5	\	3.5	120	30.0	25	27.2	80	0.8	FDA3MK155G++2GL5
1100	2.0	32.0	24.5	15.0	27.5	\	4.0	160	25.0	25	25.0	80	0.8	FDA3MK205G++2GL5
1100	2.2	32.0	28.0	14.0	27.5	\	5.0	176	16.5	25	24.2	80	0.8	FDA3MK225G++2GL5
1100	3.3	32.0	28.0	18.0	27.5	\	6.5	264	11.5	25	20.6	80	0.8	FDA3MK335G++2GL5
1100	4.0	32.0	33.0	18.0	27.5	\	8.0	320	10.5	25	14.9	80	0.8	FDA3MK405G++2GL5
1100	5.0	32.0	37.0	22.0	27.5	\	8.5	400	9.5	28	14.6	80	0.8	FDA3MK505G++2GL5
1100	6.8	42.5	33.5	22.0	37.5	10.2	12.0	272	13.5	30	5.1	40	1.2	FDA3MK685K++4KB5
1100	8.0	42.5	40.0	20.0	37.5	\	10.5	320	14.0	30	6.5	40	1.0	FDA3MK805K++2KL5
1100	8.0	42.5	40.0	20.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDA3MJ805K++4KB5
1100	8.0	42.5	37.0	22.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDA3MK805K++4KB5
1100	9.0	42.5	37.0	22.0	37.5	10.2	12.8	360	12.2	30	5.0	40	1.2	FDA3MK905K++4KB5
1100	10.0	42.5	44.0	24.0	37.5	\	14.0	400	9.0	30	5.7	40	1.0	FDA3MK106K++2KL5
1100	10.0	42.5	44.0	24.0	37.5	10.2	15.0	400	8.5	30	5.2	40	1.2	FDA3MK106K++4KB5
1100	12.0	42.5	45.0	30.0	37.5	20.3	15.5	480	7.5	30	5.5	40	1.2	FDA3MK126K++4KD5
1100	15.0	42.5	45.0	30.0	37.5	20.3	16.0	600	7.0	30	5.4	40	1.2	FDA3MK156K++4KD5
1100	18.0	42.5	50.0	35.0	37.5	20.3	15.5	720	7.5	30	5.5	40	1.2	FDA3MK186K++4KD5
1100	20.0	42.5	50.0	35.0	37.5	20.3	16.5	800	7.2	35	5.5	40	1.2	FDA3MK206K++4KD5
1100	20.0	57.5	45.0	30.0	52.5	20.3	12.0	500	8.5	35	8.2	25	1.2	FDA3MK206M++4MD5
1100	25.0	57.5	50.0	35.0	52.5	20.3	13.0	625	8.2	35	8.0	25	1.2	FDA3MK256M++4MD5
1100	30.0	57.5	50.0	35.0	52.5	20.3	15.0	750	5.0	35	8.9	25	1.2	FDA3MK306M++4MD5
1100	35.0	57.5	60.0	35.0	52.5	20.3	16.0	875	4.9	35	8.7	25	1.2	FDA3MK356M++4MD5

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

FDA series

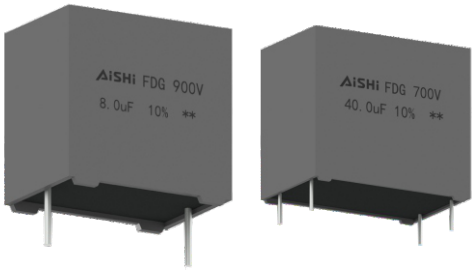
Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
1100	40.0	57.5	65.0	35.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDA3MJ406M++4MD5
1100	40.0	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDA3MK406M++4MD5
1100	45.0	57.5	70.0	35.0	52.5	20.3	18.0	1125	5.4	35	6.2	25	1.2	FDA3MK456M++4MD5
1100	50.0	57.5	65.0	45.0	52.5	20.3	19.5	1250	5.2	35	5.8	25	1.2	FDA3MK506M++4MD5
1200	1.0	32.0	20.0	11	27.5	\	4.5	90	32.5	25	15.2	90	0.8	FDA3BK105G++2GL5
1200	2.0	32.0	24.5	15	27.5	\	5.0	180	32.5	25	12.3	90	0.8	FDA3BK205G++2GL5
1200	2.2	32.0	28.0	18	27.5	\	5.5	198	17.0	25	19.4	90	0.8	FDA3BK225G++2GL5
1200	3.0	32.0	28.0	18	27.5	\	7.0	270	16.0	25	12.8	90	0.8	FDA3BK305G++2GL5
1200	3.3	32.0	33.0	18	27.5	\	8.0	297	13.5	25	11.6	90	0.8	FDA3BK335G++2GL5
1200	5.0	32.0	37.0	22	27.5	\	10.0	450	12.0	28	8.3	90	0.8	FDA3BK505G++2GL5
1200	5.0	42.5	33.5	22	37.5	\	7.5	225	15.5	30	11.5	45	1.0	FDA3BK505K++2KL5
1200	6.0	42.5	40.0	20	37.5	\	7.5	270	15.5	30	11.5	45	1.0	FDA3BK605K++2KL5
1200	7.0	42.5	37.0	22	37.5	10.2	8.0	315	15.2	30	11.0	45	1.2	FDA3BK705K++4KB5
1200	8.0	42.5	44.0	24	37.5	10.2	9.0	360	12.5	30	9.9	45	1.2	FDA3BK805K++4KB5
1200	10.0	42.5	44.0	24	37.5	10.2	10.0	450	10.5	30	9.5	45	1.2	FDA3BK106K++4KB5
1200	10.0	42.5	45.0	30	37.5	20.3	12.0	450	8.0	30	8.7	45	1.2	FDA3BJ106K++4KD5
1200	15.0	42.5	50.0	35	37.5	20.3	15.0	675	6.5	30	6.8	45	1.2	FDA3BJ106K++4KD5
1200	20.0	57.5	45.0	30	52.5	20.3	13.0	600	8.5	35	9.7	30	1.2	FDA3BK206M++4MD5
1200	25.0	57.5	50.0	35	52.5	20.3	15.0	750	6.5	35	9.1	30	1.2	FDA3BK256M++4MD5
1200	30.0	57.5	55.0	45	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDA3BJ306M++4MD5
1200	30.0	57.5	60.0	35	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDA3BK306M++4MD5
1200	35.0	57.5	55.0	45	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDA3BJ356M++4MD5
1200	35.0	57.5	70.0	35	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDA3BK356M++4MD5
1200	40.0	57.5	65.0	45	52.5	20.3	20.0	1200	4.5	35	5.6	30	1.2	FDA3BK406M++4MD5
1200	45.0	57.5	65.0	45	52.5	20.3	22.0	1350	4.3	35	5.5	30	1.2	FDA3BK456M++4MD5

* 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) 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 applications.
- Frequency converters, industrial power supplies and solar inverter.
- Energy storage and automotive.

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 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 (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤ ±5% DF change (△tgδ):≤50 X 10^{-4} 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%

FDG series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
450	1.0	32.0	18.0	9.0	27.5	\	2.5	60	45.0	25	51.7	60	0.8	FDG2WK105G++2GL5
450	2.0	32.0	18.0	9.0	27.5	\	3.0	120	30.0	25	50.5	60	0.8	FDG2WK205G++2GL5
450	3.0	32.0	20.0	11.0	27.5	\	4.0	180	20.0	25	49.3	60	0.8	FDG2WK305G++2GL5
450	4.0	32.0	20.0	11.0	27.5	\	4.0	240	18.0	25	48.4	60	0.8	FDG2WK405G++2GL5
450	5.0	32.0	20.0	11.0	27.5	\	5.0	300	12.0	25	47.1	60	0.8	FDG2WK505G++2GL5
450	5.0	32.0	22.0	13.0	27.5	\	5.5	300	11.0	25	46.5	60	0.8	FDG2WJ505G++2GL5
450	10.0	32.0	28.0	14.0	27.5	\	7.5	600	8.5	25	23.7	60	0.8	FDG2WK106G++2GL5
450	10.0	32.0	28.0	18.0	27.5	\	9.0	600	8.0	25	23.7	60	0.8	FDG2WJ106G++2GL5
450	12.0	32.0	33.0	18.0	27.5	\	10.0	720	7.0	25	20.5	60	0.8	FDG2WK126G++2GL5
450	15.0	32.0	37.0	22.0	27.5	\	11.5	900	6.0	25	14.5	60	0.8	FDG2WK156G++2GL5
450	15.0	42.5	18.0	24.0	37.5	\	9.5	450	8.5	25	15.5	30	1.0	FDG2WK156K++2KL5
450	18.0	32.0	37.0	22.0	27.5	\	10.0	1080	6.0	28	13.8	60	0.8	FDG2WK186G++2GL5
450	20.0	32.0	37.0	22.0	27.5	\	11.0	1200	5.0	28	12.8	60	0.8	FDG2WK206G++2GL5
450	22.0	32.0	37.0	22.0	27.5	\	12.5	1320	5.0	28	12.8	60	0.8	FDG2WK226G++2GL5
450	25.0	42.5	37.0	22.0	37.5	10.2	12.5	875	5.5	30	12.3	35	1.2	FDG2WK256K++4KB5
450	30.0	42.5	40.0	20.0	37.5	10.2	12.0	1050	6.0	30	11.6	35	1.2	FDG2WK306K++4KB5
450	40.0	42.5	37.0	28.0	37.5	10.2	14.0	1400	5.5	30	9.3	35	1.2	FDG2WJ406K++4KB5
450	40.0	42.5	44.0	24.0	37.5	10.2	15.0	1400	5.2	30	9.0	35	1.2	FDG2WK406K++4KB5
450	40.0	57.5	22.0	43.0	52.5	20.3	12.0	1400	8.0	30	9.5	35	1.2	FDG2WK406M++4MD5
450	50.0	42.5	45.0	30.0	37.5	20.3	15.0	1750	4.0	30	11.1	35	1.2	FDG2WK506K++4KD5
450	50.0	57.5	22.0	43.0	52.5	20.3	14.0	1750	6.5	30	9.5	35	1.2	FDG2WK506M++4MD5
450	55.0	57.5	45.0	30.0	37.5	20.3	15.5	1925	5.0	30	9.8	35	1.2	FDG2WK556M++4MD5
450	60.0	57.5	45.0	30.0	37.5	20.3	16.5	2100	4.5	30	9.2	35	1.2	FDG2WK606M++4MD5
450	60.0	42.5	45.0	30.0	37.5	20.3	16.5	2100	4.0	30	8.6	35	1.2	FDG2WK606K++4KD5
450	80.0	57.5	45.0	30.0	52.5	20.3	16.0	1600	4.0	35	7.4	20	1.2	FDG2WK806M++4MD5
450	100.0	57.5	50.0	35.0	52.5	20.3	18.0	2000	3.8	35	6.2	20	1.2	FDG2WK107M++4MD5
450	130.0	57.5	60.0	35.0	52.5	20.3	22.0	2600	3.5	35	5.5	20	1.2	FDG2WK137M++4MD5
450	140.0	57.5	65.0	35.0	52.5	20.3	24.0	2800	3.4	35	5.4	20	1.2	FDG2WK147M++4MD5
450	150.0	57.5	70.0	35.0	52.5	20.3	26.0	3000	3.2	35	5.2	20	1.2	FDG2WK157M++4MD5
450	160.0	57.5	80.0	35.0	52.5	20.3	28.0	3200	3.1	35	5.0	20	1.2	FDG2WK167M++4MD5
450	170.0	57.5	80.0	35.0	52.5	20.3	30.0	3400	3.0	35	4.8	20	1.2	FDG2WK177M++4MD5
550	3.0	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDG2JK305G++2GL5
550	5.0	32.0	22.0	13.0	27.5	\	6.0	300	14.0	25	16.8	60	0.8	FDG2JK505G++2GL5
550	8.0	32.0	28.0	14.0	27.5	\	8.5	480	12.5	25	12.6	60	0.8	FDG2JK805G++2GL5
550	10.0	32.0	33.0	18.0	27.5	\	10.0	600	8.0	25	12.5	60	0.8	FDG2JK106G++2GL5
550	15.0	32.0	37.0	22.0	27.5	\	12.0	900	6.5	28	9.1	60	0.8	FDG2JK156G++2GL5
550	15.0	32.0	37.0	22.0	27.5	10.2	13.0	900	5.5	28	8.1	60	1.2	FDG2JK156G++4GB5
550	15.0	42.5	18.0	24.0	37.5	\	10.5	900	6.5	28	8.3	60	1.0	FDG2JK156K++2KL5
550	20.0	42.5	40.0	20.0	37.5	10.2	12.5	700	6.5	30	9.8	35	1.2	FDG2JK206K++4KB5
550	22.0	42.5	40.0	20.0	37.5	10.2	13.5	770	6.5	30	8.4	35	1.2	FDG2JK226K++4KB5
550	25.0	42.5	40.0	20.0	37.5	10.2	14.5	875	6.5	30	7.3	35	1.2	FDG2JK256K++4KB5
550	30.0	42.5	44.0	24.0	37.5	10.2	16.0	1050	6.0	30	6.5	35	1.2	FDG2JK306K++4KB5
550	35.0	42.5	45.0	30.0	37.5	20.3	18.0	1225	6.0	30	5.1	35	1.2	FDG2JK356K++4KD5
550	40.0	42.5	45.0	30.0	37.5	20.3	18.0	1400	5.5	30	5.1	35	1.2	FDG2JK406K++4KD5
550	40.0	57.5	22.0	43.0	57.5	20.3	16.0	1400	5.8	30	5.2	35	1.2	FDG2JK406M++4MD5
550	50.0	42.5	50.0	35.0	37.5	20.3	20.0	1750	5.0	30	5.0	35	1.2	FDG2JK506K++4KD5
550	60.0	57.5	45.0	30.0	37.5	20.3	18.0	1200	4.8	35	6.2	20	1.2	FDG2JK606M++4MD5
550	75.0	57.5	50.0	35.0	52.5	20.3	20.0	1500	5.0	35	5.0	20	1.2	FDG2JK756M++4MD5
550	100.0	57.5	55.0	45.0	52.5	20.3	24.0	2000	4.5	35	3.9	20	1.2	FDG2JK107M++4MD5
550	110.0	57.5	55.0	45.0	52.5	20.3	26.0	2200	4.0	35	3.7	20	1.2	FDG2JK117M++4MD5
550	130.0	57.5	60.0	35.0	52.5	20.3	23.0	2600	3.4	35	5.4	20	1.2	FDG2JK137M++4MD5
550	140.0	57.5	65.0	35.0	52.5	20.3	25.0	2800	3.3	35	5.3	20	1.2	FDG2JK147M++4MD5
550	150.0	57.5	70.0	35.0	52.5	20.3	27.0	3000	3.1	35	5.0	20	1.2	FDG2JK157M++4MD5
550	160.0	57.5	80.0	35.0	52.5	20.3	29.0	3200	3.0	35	4.8	20	1.2	FDG2JK167M++4MD5
550	170.0	57.5	80.0	35.0	52.5	20.3	32.0	3400	2.8	35	4.7	20	1.2	FDG2JK177M++4MD5

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

FDG series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
600	3.0	32.0	20.0	11.0	27.5	\	4.0	180	28.0	25	22.3	60	0.8	FDG2KK305G++2GL5
600	4.0	32.0	20.0	11.0	27.5	\	5.0	240	26.0	25	14.3	60	0.8	FDG2KK405G++2GL5
600	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.5	25	26.5	60	0.8	FDG2KK505G++2GL5
600	8.0	32.0	28.0	14.0	27.5	\	7.5	480	12.0	25	17.8	60	0.8	FDG2KK805G++2GL5
600	10.0	32.0	33.0	18.0	27.5	\	8.5	600	7.5	25	19.8	60	0.8	FDG2KK106G++2GL5
600	12.0	32.0	33.0	18.0	27.5	\	9.5	720	7.5	25	15.8	60	0.8	FDG2KK126G++2GL5
600	12.0	42.5	18.0	24.0	37.5	\	8.0	420	9.5	25	16.8	35	1.0	FDG2KK126K++2KL5
600	15.0	32.0	37.0	22.0	27.5	\	10.5	900	7.5	28	12.1	60	0.8	FDG2KK156G++2GL5
600	15.0	42.5	18.0	24.0	37.5	\	12.0	525	6.0	28	16.2	35	1.0	FDG2KK156K++2KL5
600	20.0	42.5	40.0	20.0	37.5	10.2	11.0	700	6.0	30	13.8	35	1.2	FDG2KK206K++4KB5
600	30.0	42.5	37.0	28.0	37.5	10.2	13.0	1050	5.5	30	10.8	35	1.2	FDG2KK306K++4KB5
600	35.0	42.5	44.0	24.0	37.5	10.2	16.5	1225	5.0	30	8.5	35	1.2	FDG2KK356K++4KB5
600	35.0	57.5	22.0	43.0	52.5	20.3	13.5	700	5.5	30	10.7	20	1.2	FDG2KK356M++4MD5
600	40.0	42.5	45.0	30.0	37.5	20.3	18.0	1400	4.0	30	7.7	35	1.2	FDG2KK406K++4KD5
600	50.0	57.5	50.0	35.0	52.5	20.3	14.0	1000	6.5	35	7.8	20	1.2	FDG2KK506M++4MD5
600	60.0	57.5	50.0	35.0	52.5	20.3	16.0	1200	5.0	35	7.8	20	1.2	FDG2KK606M++4MD5
600	70.0	57.5	50.0	35.0	52.5	20.3	18.0	1400	5.0	35	6.2	20	1.2	FDG2KK706M++4MD5
600	80.0	57.5	55.0	45.0	52.5	20.3	20.0	1600	4.0	35	6.3	20	1.2	FDG2KK806M++4MD5
600	90.0	57.5	55.0	45.0	52.5	20.3	24.0	1800	4.0	35	4.3	20	1.2	FDG2KK906M++4MD5
600	100	57.5	53.0	50.0	52.5	20.3	26.0	2000	4.0	35	3.7	20	1.2	FDG2KK107M++4MD5
600	110	57.5	53.0	50.0	52.5	20.3	28.0	2200	3.5	35	3.6	20	1.2	FDG2KK117M++4MD5
600	120	57.5	60.0	35.0	52.5	20.3	30.0	2400	3.4	35	3.5	20	1.2	FDG2KK127M++4MD5
600	130	57.5	65.0	35.0	52.5	20.3	32.0	2600	3.3	35	3.4	20	1.2	FDG2KK137M++4MD5
600	140	57.5	70.0	35.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDG2KK147M++4MD5
600	140	57.5	65.0	45.0	52.5	20.3	34.0	2800	3.2	35	3.4	20	1.2	FDG2KJ147M++4MD5
600	150	57.5	80.0	35.0	52.5	20.3	36.0	3000	3.0	35	3.3	20	1.2	FDG2KK157M++4MD5
700	1.0	32.0	18.0	9.0	27.5	\	2.5	60	54.0	25	50.6	60	0.8	FDG2MK105G++2GL5
700	2.0	32.0	18.0	9.0	27.5	\	3.0	120	35.0	25	49.5	60	0.8	FDG2MK205G++2GL5
700	3.0	32.0	20.0	11.0	27.5	\	4.5	180	28.0	25	47.0	60	0.8	FDG2MK305G++2GL5
700	3.3	32.0	28.0	14.0	27.5	\	5.5	198	26.0	25	31.5	60	0.8	FDG2MK335G++2GL5
700	5.0	32.0	28.0	14.0	27.5	\	6.0	300	14.0	25	26.5	60	0.8	FDG2MK505G++2GL5
700	6.0	32.0	28.0	18.0	27.5	\	6.0	360	14.0	25	16.9	60	0.8	FDG2MK605G++2GL5
700	8.0	32.0	33.0	18.0	27.5	\	9.0	480	10.0	25	12.3	60	0.8	FDG2MK805G++2GL5
700	10.0	32.0	33.0	18.0	27.5	\	10.0	600	7.0	25	14.3	60	0.8	FDG2MJ106G++2GL5
700	10.0	32.0	37.0	22.0	27.5	\	12.0	600	6.5	28	10.7	60	0.8	FDG2MK106G++2GL5
700	10.0	42.5	18.0	24.0	37.5	\	11.5	350	7.5	30	10.1	35	1.0	FDG2MK106K++2KL5
700	12.0	32.0	37.0	22.0	27.5	\	12.5	720	6.0	28	9.2	60	0.8	FDG2MK126G++2GL5
700	12.0	42.5	18.0	24.0	37.5	\	12.0	420	7.0	30	9.8	35	1.0	FDG2MK126K++2KL5
700	15.0	42.5	33.5	22.0	37.5	\	9.0	525	9.0	30	13.7	35	1.0	FDG2MK156K++2KL5
700	15.0	42.5	33.5	22.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDG2MK156K++4KB5
700	15.0	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDG2MJ156K++4KB5
700	20.0	42.5	37.0	28.0	37.5	10.2	12.0	700	7.5	30	11.6	35	1.2	FDG2MK206K++4KB5
700	22.0	42.5	44.0	24.0	37.5	10.2	14.0	770	6.5	30	9.3	35	1.2	FDG2MK226K++4KB5
700	25.0	42.5	44.0	24.0	37.5	10.2	16.0	875	6.0	30	7.8	35	1.2	FDG2MK256K++4KB5
700	30.0	42.5	45.0	30.0	37.5	20.3	16.0	1050	5.8	30	8.7	35	1.2	FDG2MK306K++4KD5
700	30.0	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	9.8	20	1.2	FDG2MK306M++4MD5
700	35.0	42.5	50.0	35.0	37.5	20.3	20.0	1225	5.5	30	6.3	35	1.2	FDG2MK356K++4KD5
700	40.0	57.5	45.0	30.0	52.5	20.3	14.0	800	5.0	35	8.5	20	1.2	FDG2MK406M++4MD5
700	45.0	57.5	45.0	30.0	52.5	20.3	15.5	900	5.0	35	7.6	20	1.2	FDG2MK456M++4MD5
700	50.0	57.5	50.0	35.0	52.5	20.3	15.0	1000	4.8	35	8.1	20	1.2	FDG2MK506M++4MD5
700	55.0	57.5	50.0	35.0	52.5	20.3	16.0	1100	4.5	35	8.7	20	1.2	FDG2MK556M++4MD5
700	60.0	57.5	50.0	35.0	52.5	20.3	18.0	1200	4.0	35	7.7	20	1.2	FDG2MK606M++4MD5
700	65.0	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDG2MK656M++4MD5
700	70.0	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDG2MK706M++4MD5
700	75.0	57.5	55.0	45.0	52.5	20.3	20.0	1500	3.8	35	6.3	20	1.2	FDG2MK756M++4MD5
700	80.0	57.5	55.0	45.0	52.5	20.3	22.0	1600	3.5	35	5.9	20	1.2	FDG2MJ806M++4MD5
700	80.0	57.5	60.0	35.0	52.5	20.3	23.0	1600	3.4	35	5.8	20	1.2	FDG2MK806M++4MD5

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

FDG series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Therma	dv/dt	Lead	Part
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	Number
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
700	90.0	57.5	55.0	45.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDG2MJ906M++4MD5
700	90.0	57.5	60.0	35.0	52.5	20.3	24.0	1800	3.5	35	5.0	20	1.2	FDG2MK906M++4MD5
700	100	57.5	65.0	35.0	52.5	20.3	26.0	2000	3.5	35	5.9	20	1.2	FDG2MK107M++4MD5
700	110	57.5	70.0	35.0	52.5	20.3	28.0	2200	3.4	35	5.8	20	1.2	FDG2MK117M++4MD5
700	120	57.5	80.0	35.0	52.5	20.3	30.0	2400	3.0	35	5.6	20	1.2	FDG2MK127M++4MD5
700	130	57.5	65.0	45.0	52.5	20.3	32.0	2600	2.8	35	5.4	20	1.2	FDG2MK137M++4MD5
800	1.0	32.0	18.0	9.0	27.5	\	2.0	60	62.0	25	45.7	60	0.8	FDG2NK105G++2GL5
800	2.0	32.0	20.0	11.0	27.5	\	3.5	120	31.0	25	42.5	60	0.8	FDG2NK205G++2GL5
800	3.0	32.0	22.0	13.0	27.5	\	4.5	180	21.0	25	35.4	60	0.8	FDG2NK305G++2GL5
800	3.3	32.0	28.0	14.0	27.5	\	4.0	198	25.0	25	32.1	60	0.8	FDG2NK335G++2GL5
800	5.0	32.0	28.0	14.0	27.5	\	6.0	300	12.0	25	26.5	60	0.8	FDG2NK505G++2GL5
800	6.0	32.0	28.0	18.0	27.5	\	7.5	360	10.5	25	18.6	60	0.8	FDG2NK605G++2GL5
800	8.0	32.0	33.0	18.0	27.5	\	9.5	480	9.5	25	14.3	60	0.8	FDG2NK805G++2GL5
800	9.0	32.0	33.0	18.0	27.5	\	10.0	540	8.5	25	9.1	60	0.8	FDG2NK905G++2GL5
800	10.0	32.0	37.0	22.0	27.5	\	11.5	600	9.5	28	8.0	60	0.8	FDG2NK106G++2GL5
800	10.0	42.5	32.0	19.0	37.5	\	8.0	350	12.5	30	15.8	35	1.2	FDG2NK106K++2KL5
800	15.0	42.5	40.0	20.0	37.5	10.2	10.0	525	8.0	30	12.5	35	1.2	FDG2NK156K++4KB5
800	20.0	42.5	37.0	28.0	37.5	10.2	12.0	700	7.0	30	11.6	35	1.2	FDG2NK206K++4KB5
800	20.0	42.5	44.0	24.0	37.5	10.2	13.5	700	6.5	30	11.8	35	1.2	FDG2NJ206K++4KB5
800	22.0	42.5	44.0	24.0	37.5	10.2	14.0	770	6.0	30	9.3	35	1.2	FDG2NK226K++4KB5
800	25.0	42.5	45.0	30.0	37.5	20.3	14.0	875	5.5	30	7.5	35	1.2	FDG2NK256K++4KD5
800	30.0	42.5	45.0	30.0	37.5	20.3	16.0	1050	4.5	30	8.7	35	1.2	FDG2NK306K++4KD5
800	35.0	57.5	45.0	30.0	52.5	20.3	14.2	700	6.5	35	7.6	20	1.2	FDG2NK356M++4MD5
800	40.0	57.5	45.0	30.0	52.5	20.3	14.0	800	6.0	35	8.5	20	1.2	FDG2NK406M++4MD5
800	45.0	57.5	45.0	30.0	52.5	20.3	15.5	900	5.5	35	7.6	20	1.2	FDG2NK456M++4MD5
800	47.0	57.5	50.0	35.0	52.5	20.3	17.5	940	5.0	35	6.5	20	1.2	FDG2NK476M++4MD5
800	50.0	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	20	1.2	FDG2NK506M++4MD5
800	55.0	57.5	50.0	35.0	52.5	20.3	17.0	1100	4.6	35	6.9	20	1.2	FDG2NK556M++4MD5
800	65.0	57.5	60.0	35.0	52.5	20.3	19.0	1300	4.0	35	7.3	20	1.2	FDG2NK656M++4MD5
800	65.0	57.5	55.0	45.0	52.5	20.3	20.0	1300	4.0	35	6.3	20	1.2	FDG2NJ656M++4MD5
800	70.0	57.5	55.0	45.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDG2NJ706M++4MD5
800	70.0	57.5	60.0	35.0	52.5	20.3	20.0	1400	3.8	35	6.3	20	1.2	FDG2NK706M++4MD5
800	75.0	57.5	55.0	45.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDG2NJ756M++4MD5
800	75.0	57.5	65.0	35.0	52.5	20.3	22.0	1500	3.8	35	6.0	20	1.2	FDG2NK756M++4MD5
800	80.0	57.5	65.0	45.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDG2NJ806M++4MD5
800	80.0	57.5	70.0	35.0	52.5	20.3	23.0	1600	3.5	35	5.9	20	1.2	FDG2NK806M++4MD5
800	90.0	57.5	65.0	45.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDG2NJ906M++4MD5
800	90.0	57.5	80.0	35.0	52.5	20.3	25.0	1800	3.3	35	5.0	20	1.2	FDG2NK906M++4MD5
800	100.0	57.5	65.0	45.0	52.5	20.3	28.0	2000	3.2	35	4.8	20	1.2	FDG2NK107M++4MD5
900	1.0	32.0	18.0	9.0	27.5	\	2.0	60	63.0	25	46.8	60	0.8	FDG2QK105G++2GL5
900	2.0	32.0	20.0	11.0	27.5	\	3.0	120	25.0	25	44.4	60	0.8	FDG2QK205G++2GL5
900	3.0	32.0	22.0	13.0	27.5	\	5.0	180	18.5	25	21.6	60	0.8	FDG2QK305G++2GL5
900	3.3	32.0	24.5	15.0	27.5	\	5.0	198	18.5	25	21.6	60	0.8	FDG2QK335G++2GL5
900	5.0	32.0	28.0	18.0	27.5	\	7.0	300	12.5	25	16.3	60	0.8	FDG2QK505G++2GL5
900	6.0	32.0	33.0	18.0	27.5	\	8.0	360	11.0	25	14.2	60	0.8	FDG2QK605G++2GL5
900	8.0	32.0	37.0	22.0	27.5	\	10.5	480	10.0	28	9.1	60	0.8	FDG2QK805G++2GL5
900	10.0	32.0	37.0	22.0	27.5	\	12.0	600	10.0	28	6.9	60	0.8	FDG2QK106G++2GL5
900	10.0	42.5	40.0	20.0	37.5	\	8.5	350	12.0	30	11.5	35	1.0	FDG2QK106K++2KL5
900	10.0	42.5	40.0	20.0	37.5	10.2	9.5	350	11.5	30	9.6	35	1.2	FDG2QK106K++4KB5
900	15.0	42.5	44.0	24.0	37.5	\	10.5	525	8.0	30	11.3	35	1.0	FDG2QK156K++2KL5
900	15.0	42.5	44.0	24.0	37.5	10.2	12.0	525	7.5	30	9.3	35	1.2	FDG2QK156K++4KB5
900	18.0	42.5	44.0	24.0	37.5	\	10.5	630	8.0	30	11.3	35	1.0	FDG2QK186K++2KL5
900	18.0	42.5	44.0	24.0	37.5	10.2	12.0	630	7.5	30	9.3	35	1.2	FDG2QK186K++4KB5
900	20.0	42.5	45.0	30.0	37.5	\	14.0	700	6.0	30	8.5	35	1.0	FDG2QK206K++2KL5
900	20.0	42.5	45.0	30.0	37.5	20.3	15.0	700	5.5	30	8.1	35	1.2	FDG2QK206K++4KD5
900	20.0	57.5	22.0	43.0	52.5	20.3	12.0	400	8.6	30	10.5	20	1.2	FDG2QK206M++4MD5
900	25.0	42.5	45.0	30.0	37.5	20.3	17.0	875	5.5	30	6.3	35	1.2	FDG2QK256K++4KD5

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

FDG series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	Number
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
900	30.0	42.5	50.0	35.0	37.5	20.3	19.0	1050	5.0	30	5.5	35	1.2	FDG2QK306K++4KD5
900	30.0	57.5	45.0	30.0	52.5	20.3	15.0	600	5.5	35	8.1	20	1.2	FDG2QK306M++4MD5
900	35.0	57.5	50.0	35.0	52.5	20.3	15.5	700	5.5	35	7.6	20	1.2	FDG2QK356M++4MD5
900	40.0	57.5	50.0	35.0	52.5	20.3	16.0	800	6.5	35	6.0	20	1.2	FDG2QK406M++4MD5
900	50.0	57.5	50.0	35.0	52.5	20.3	18.0	1000	3.6	35	8.6	20	1.2	FDG2QK506M++4MD5
900	55.0	57.5	60.0	35.0	52.5	20.3	19.0	1100	3.5	35	7.9	20	1.2	FDG2QK556M++4MD5
900	55.0	57.5	55.0	45.0	52.5	20.3	20.0	1100	3.4	35	7.4	20	1.2	FDG2QJ556M++4MD5
900	60.0	57.5	55.0	45.0	52.5	20.3	20.0	1200	3.4	35	7.4	20	1.2	FDG2QK606M++4MD5
900	65.0	57.5	70.0	35.0	52.5	20.3	22.0	1300	3.3	35	7.0	20	1.2	FDG2QK656M++4MD5
900	70.0	57.5	55.0	45.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDG2QK706M++4MD5
900	70.0	57.5	80.0	35.0	52.5	20.3	24.0	1400	3.2	35	6.8	20	1.2	FDG2QK706M++4MD5
900	80.0	57.5	65.0	45.0	52.5	20.3	25.0	1600	3.2	35	6.7	20	1.2	FDG2QK806M++4MD5
1000	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDG3KK105G++2GL5
1000	2.0	32.0	22.0	13.0	27.5	\	3.5	160	30.0	25	27.2	80	0.8	FDG3KK205G++2GL5
1000	3.0	32.0	24.5	15.0	27.5	\	5.0	240	25.0	25	16.0	80	0.8	FDG3KK305G++2GL5
1000	5.0	32.0	33.0	18.0	27.5	\	8.0	400	14.0	25	11.2	80	0.8	FDG3KK505G++2GL5
1000	8.0	32.0	37.0	22.0	27.5	\	10.0	640	12.0	28	8.3	80	0.8	FDG3KK805G++2GL5
1000	10.0	42.5	40.0	20.0	37.5	\	8.5	400	12.0	30	11.5	40	1.0	FDG3KK106K++2KL5
1000	10.0	42.5	40.0	20.0	37.5	10.2	9.5	400	11.5	30	9.6	40	1.2	FDG3KK106K++4KB5
1000	12.0	42.5	44.0	24.0	37.5	10.2	10.5	480	9.0	30	10.1	40	1.2	FDG3KK126K++4KB5
1000	15.0	42.5	44.0	24.0	37.5	\	10.5	600	8.0	30	11.3	40	1.0	FDG3KK156K++2KL5
1000	15.0	42.5	44.0	24.0	37.5	10.2	12.0	600	7.5	30	9.3	40	1.2	FDG3KK156K++4KB5
1000	15.0	42.5	45.0	30.0	37.5	20.3	14.0	600	7.5	30	6.8	40	1.2	FDG3KK156K++4KD5
1000	15.0	57.5	22.0	43.0	52.5	20.3	12.0	600	8.5	30	7.9	40	1.2	FDG3KK156M++4MD5
1000	20.0	42.5	45.0	30.0	37.5	20.3	15.0	800	6.5	30	6.8	40	1.2	FDG3KK206K++4KD5
1000	25.0	42.5	50.0	35.0	37.5	20.3	18.0	1000	5.5	30	5.6	40	1.2	FDG3KK256K++4KD5
1000	30.0	57.5	45.0	30.0	52.5	20.3	15.0	750	5.5	35	8.1	25	1.2	FDG3KK306M++4MD5
1000	35.0	57.5	50.0	35.0	52.5	20.3	16.0	875	5.5	35	7.1	25	1.2	FDG3KK356M++4MD5
1000	40.0	57.5	50.0	35.0	52.5	20.3	16.0	1000	5.0	35	7.8	25	1.2	FDG3KK406M++4MD5
1000	40.0	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.0	35	7.6	25	1.2	FDG3KJ406M++4MD5
1000	50.0	57.5	55.0	45.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDG3KJ506M++4MD5
1000	50.0	57.5	65.0	35.0	52.5	20.3	19.0	1250	4.5	35	6.2	25	1.2	FDG3KK506M++4MD5
1000	55.0	57.5	70.0	35.0	52.5	20.3	20.0	1375	4.4	35	6.1	25	1.2	FDG3KK556M++4MD5
1000	60.0	57.5	80.0	35.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDG3KJ606M++4MD5
1000	60.0	57.5	65.0	45.0	52.5	20.3	22.0	1500	4.0	35	5.2	25	1.2	FDG3KK606M++4MD5
1100	1.0	32.0	20.0	11.0	27.5	\	2.5	80	45.0	25	35.6	80	0.8	FDG3MK105G++2GL5
1100	1.5	32.0	22.0	13.0	27.5	\	3.5	120	30.0	25	27.2	80	0.8	FDG3MK155G++2GL5
1100	2.0	32.0	24.5	15.0	27.5	\	4.0	160	25.0	25	25.0	80	0.8	FDG3MK205G++2GL5
1100	2.2	32.0	28.0	14.0	27.5	\	5.0	176	16.5	25	24.2	80	0.8	FDG3MK225G++2GL5
1100	3.3	32.0	28.0	18.0	27.5	\	6.5	264	11.5	25	20.6	80	0.8	FDG3MK335G++2GL5
1100	4.0	32.0	33.0	18.0	27.5	\	8.0	320	10.5	25	14.9	80	0.8	FDG3MK405G++2GL5
1100	5.0	32.0	37.0	22.0	27.5	\	8.5	400	9.5	28	14.6	80	0.8	FDG3MK505G++2GL5
1100	6.8	42.5	33.5	22.0	37.5	10.2	12.0	272	13.5	30	5.1	40	1.2	FDG3MK685K++4KB5
1100	8.0	42.5	40.0	20.0	37.5	\	10.5	320	14.0	30	6.5	40	1.0	FDG3MK805K++2KL5
1100	8.0	42.5	40.0	20.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDG3MJ805K++4KB5
1100	8.0	42.5	37.0	22.0	37.5	10.2	12.5	320	12.5	30	5.1	40	1.2	FDG3MK805K++4KB5
1100	9.0	42.5	37.0	22.0	37.5	10.2	12.8	360	12.2	30	5.0	40	1.2	FDG3MK905K++4KB5
1100	10.0	42.5	44.0	24.0	37.5	\	14.0	400	9.0	30	5.7	40	1.0	FDG3MK106K++2KL5
1100	10.0	42.5	44.0	24.0	37.5	10.2	15.0	400	8.5	30	5.2	40	1.2	FDG3MK106K++4KB5
1100	12.0	42.5	45.0	30.0	37.5	20.3	15.5	480	7.5	30	5.5	40	1.2	FDG3MK126K++4KD5
1100	15.0	42.5	45.0	30.0	37.5	20.3	16.0	600	7.0	30	5.4	40	1.2	FDG3MK156K++4KD5
1100	18.0	42.5	50.0	35.0	37.5	20.3	15.5	720	7.5	30	5.5	40	1.2	FDG3MK186K++4KD5
1100	20.0	42.5	50.0	35.0	37.5	20.3	16.5	800	7.2	35	5.5	40	1.2	FDG3MK206K++4KD5
1100	20.0	57.5	45.0	30.0	52.5	20.3	12.0	500	8.5	35	8.2	25	1.2	FDG3MK206M++4MD5
1100	25.0	57.5	50.0	35.0	52.5	20.3	13.0	625	8.2	35	8.0	25	1.2	FDG3MK256M++4MD5

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

FDG series

Technical data

Vdc	Cap	Dimensions			P	P1	Irms	Peak	ESR	ESL	Thermal	dv/dt	Lead	Part
	Value	W	H	T			10KHz	Current	10KHz		Res		Wire	Number
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
1100	30.0	57.5	50.0	35.0	52.5	20.3	15.0	750	5.0	35	8.9	25	1.2	FDG3MK306M++4MD5
1100	35.0	57.5	60.0	35.0	52.5	20.3	16.0	875	4.9	35	8.7	25	1.2	FDG3MK356M++4MD5
1100	40.0	57.5	65.0	35.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDG3MJ406M++4MD5
1100	40.0	57.5	55.0	45.0	52.5	20.3	17.0	1000	5.5	35	6.3	25	1.2	FDG3MK406M++4MD5
1100	45.0	57.5	70.0	35.0	52.5	20.3	18.0	1125	5.4	35	6.2	25	1.2	FDG3MK456M++4MD5
1100	50.0	57.5	65.0	45.0	52.5	20.3	19.5	1250	5.2	35	5.8	25	1.2	FDG3MK506M++4MD5
1200	1.0	32.0	20.0	11	27.5	\	4.5	90	32.5	25	15.2	90	0.8	FDG3BK105G++2GL5
1200	2.0	32.0	24.5	15	27.5	\	5.0	180	32.5	25	12.3	90	0.8	FDG3BK205G++2GL5
1200	2.2	32.0	28.0	18	27.5	\	5.5	198	17.0	25	19.4	90	0.8	FDG3BK225G++2GL5
1200	3.0	32.0	28.0	18	27.5	\	7.0	270	16.0	25	12.8	90	0.8	FDG3BK305G++2GL5
1200	3.3	32.0	33.0	18	27.5	\	8.0	297	13.5	25	11.6	90	0.8	FDG3BK335G++2GL5
1200	5.0	32.0	37.0	22	27.5	\	10.0	450	12.0	28	8.3	90	0.8	FDG3BK505G++2GL5
1200	5.0	42.5	33.5	22	37.5	\	7.5	225	15.5	30	11.5	45	1.0	FDG3BK505K++2KL5
1200	6.0	42.5	40.0	20	37.5	\	7.5	270	15.5	30	11.5	45	1.0	FDG3BK605K++2KL5
1200	7.0	42.5	37.0	22	37.5	10.2	8.0	315	15.2	30	11.0	45	1.2	FDG3BK705K++4KB5
1200	8.0	42.5	44.0	24	37.5	10.2	9.0	360	12.5	30	9.9	45	1.2	FDG3BK805K++4KB5
1200	10.0	42.5	44.0	24	37.5	10.2	10.0	450	10.5	30	9.5	45	1.2	FDG3BK106K++4KB5
1200	10.0	42.5	45.0	30	37.5	20.3	12.0	450	8.0	30	8.7	45	1.2	FDG3BJ106K++4KD5
1200	15.0	42.5	50.0	35	37.5	20.3	15.0	675	6.5	30	6.8	45	1.2	FDG3BJ156K++4KD5
1200	20.0	57.5	45.0	30	52.5	20.3	13.0	600	8.5	35	9.7	30	1.2	FDG3BK206M++4MD5
1200	25.0	57.5	50.0	35	52.5	20.3	15.0	750	6.5	35	9.1	30	1.2	FDG3BK256M++4MD5
1200	30.0	57.5	55.0	45	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDG3BJ306M++4MD5
1200	30.0	57.5	60.0	35	52.5	20.3	17.0	900	5.5	35	8.1	30	1.2	FDG3BK306M++4MD5
1200	35.0	57.5	55.0	45	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDG3BJ356M++4MD5
1200	35.0	57.5	70.0	35	52.5	20.3	18.0	1050	5.0	35	6.9	30	1.2	FDG3BK356M++4MD5
1200	40.0	57.5	65.0	45	52.5	20.3	20.0	1200	4.5	35	5.6	30	1.2	FDG3BK406M++4MD5
1200	45.0	57.5	65.0	45	52.5	20.3	22.0	1350	4.3	35	5.5	30	1.2	FDG3BK456M++4MD5

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

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 driver systems.

Features

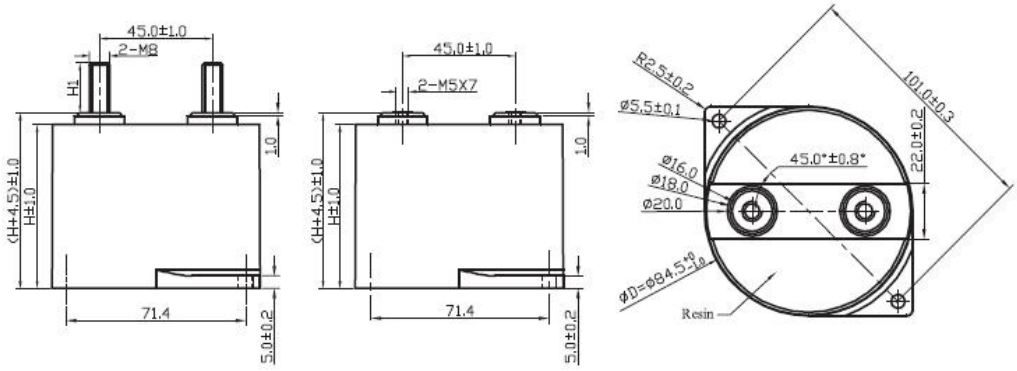
- Long lifetime
- Self-healing property
- Low Ls
- Low ESR, high ripple current handling capabilties
- Used in DC-Link circuits, can replace electrolytic capacitor

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 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 (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} 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%

FDB series

Outline Drawing



Technical data (Male terminals)

Cap Value	Vdc	Dimensions D	H	P	Irms 10KHz 50℃	Peak Current	ESR 1KHz	ESL	Thermal Res	dv/dt	Pkg Qty	Part Number
μF		mm	mm	mm	A	A	mΩ	nH	°C/W	V/us	pcs	
150	500	85.0	40.0	45.0	65.0	5250	1.8	25	4.3	35	8	FDB2HK1574++MQ8A
220	500	85.0	51.0	45.0	65.0	5500	1.8	40	4.8	25	8	FDB2HK2274++MQ8A
280	500	85.0	64.0	45.0	70.0	5600	1.6	40	5.4	20	8	FDB2HK2874++MQ8A
100	600	85.0	40.0	45.0	70.0	3500	1.5	25	5.0	35	8	FDB2KK1074++MQ8A
150	600	85.0	51.0	45.0	80.0	3750	1.4	30	6.5	25	8	FDB2KK1574++MQ8A
220	600	85.0	64.0	45.0	90.0	4400	1.5	40	4.5	20	8	FDB2KK2274++MQ8A
66	800	85.0	40.0	45.0	70.0	2310	2.0	25	5.0	35	8	FDB2NK6664++MQ8A
100	800	85.0	51.0	45.0	75.0	2500	1.8	30	5.0	25	8	FDB2NK1074++MQ8A
140	800	85.0	64.0	45.0	80.0	2800	1.6	40	8.4	20	8	FDB2NK1474++MQ8A
220	800	85.0	64.0	45.0	100.0	4400	1.4	40	4.8	20	8	FDB2NK2274++MQ8A
66	1000	85.0	40.0	45.0	70.0	2310	1.0	25	4.2	35	8	FDB3KK6664++MQ8A
120	1000	85.0	51.0	45.0	85.0	3000	2.2	30	5.2	25	8	FDB3KK1274++MQ8A
140	1000	85.0	64.0	45.0	100.0	2800	1.5	40	3.1	20	8	FDB3KK1474++MQ8A
50	1100	85.0	40.0	45.0	55.0	1750	2.4	30	4.5	35	8	FDB3MK5064++MQ8A
100	1100	85.0	51.0	45.0	55.0	2500	2.0	30	4.5	25	8	FDB3MK1074++MQ8A

Technical data (Female terminals)

Cap Value	Vdc	**Dimensions** D	H	P	Irms 10KHz 50℃	Peak Current	ESR 1KHz	ESL	Thermal Res	dv/dt	Pkg Qty	Part Number
μF		mm	mm	mm	A	A	mΩ	nH	°C/W	V/us	pcs	
150	500	85.0	40.0	45.0	65.0	5250	1.8	25	4.3	35	8	FDB2HK1574++FQ55
220	500	85.0	51.0	45.0	65.0	5500	1.8	40	4.8	25	8	FDB2HK2274++FQ55
280	500	85.0	64.0	45.0	70.0	5600	1.6	40	5.4	20	8	FDB2HK2874++FQ55
100	600	85.0	40.0	45.0	70.0	3500	1.5	25	5.0	35	8	FDB2KK1074++FQ55
150	600	85.0	51.0	45.0	80.0	3750	1.4	30	6.5	25	8	FDB2KK1574++FQ55
220	600	85.0	64.0	45.0	90.0	4400	1.5	40	4.5	20	8	FDB2KK2274++FQ55
66	800	85.0	40.0	45.0	70.0	2310	2.0	25	5.0	35	8	FDB2NK6664++FQ55
100	800	85.0	51.0	45.0	75.0	2500	1.8	30	5.0	25	8	FDB2NK1074++FQ55
140	800	85.0	64.0	45.0	80.0	2800	1.6	40	8.4	20	8	FDB2NK1474++FQ55
220	800	85.0	64.0	45.0	100.0	4400	1.4	40	4.8	20	8	FDB2NK2274++FQ55
66	1000	85.0	40.0	45.0	70.0	2310	1.0	25	4.2	35	8	FDB3KK6664++FQ55
120	1000	85.0	51.0	45.0	85.0	3000	2.2	30	5.2	25	8	FDB3KK1274++FQ55
140	1000	85.0	64.0	45.0	100.0	2800	1.5	40	3.1	20	8	FDB3KK1474++FQ55
50	1100	85.0	40.0	45.0	55.0	1750	2.4	30	4.5	35	8	FDB3MK5064++FQ55
100	1100	85.0	51.0	45.0	55.0	2500	2.0	30	4.5	25	8	FDB3MK1074++FQ55

* Customized products are available by request, contact us for more details.
* 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 $Pj=Rs*Irms^2$

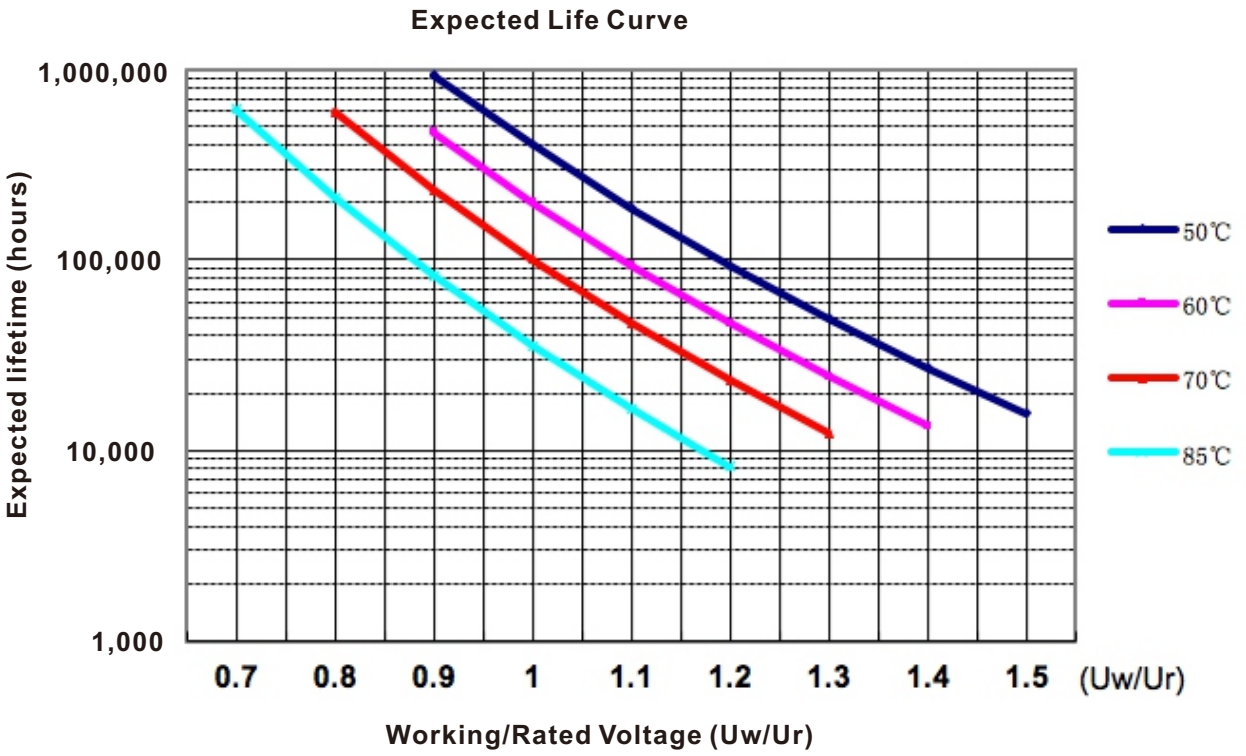
Pd: Dielectric losses

$$Pd= Xc*Irms^2*\tan\delta= Irms^2 / (2*\pi*f*C)*\tan\delta$$

T_{hs}: Hot spot temperature within the capacitor

$$T_{hs} = Ta + (Pj+ Pd)*Rth$$

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 exceed 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.

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.

Features

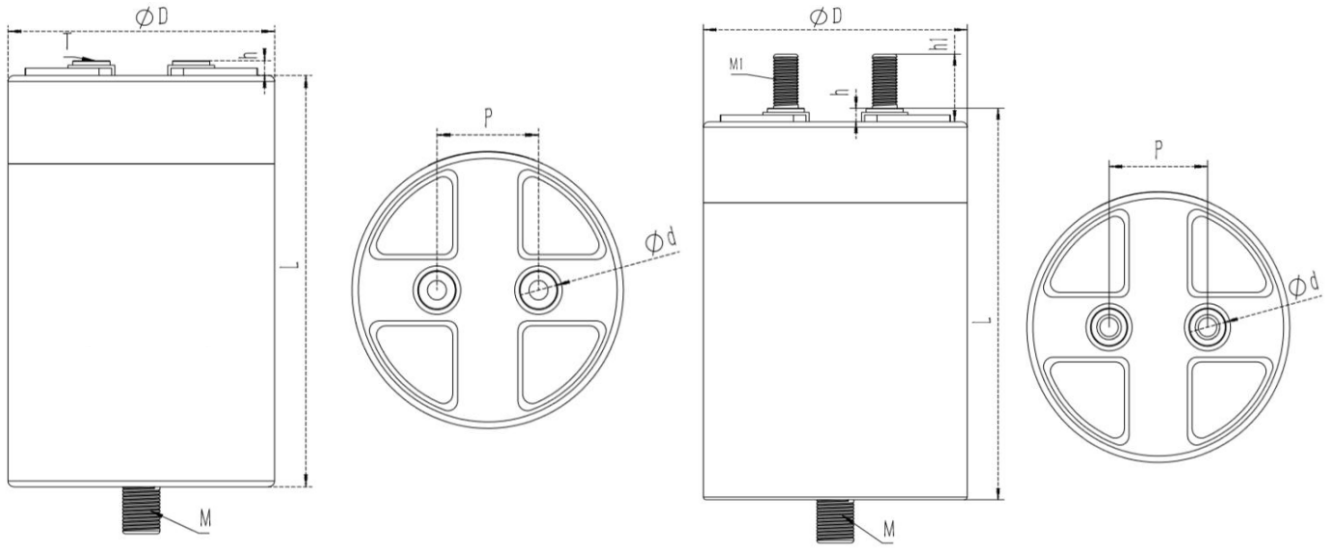
- Long lifetime
- Self-healing property
- High capacitance density
- Low ESR, high ripple current
- Used in DC-Link circuits, can replace electrolytic capacitor

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 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 (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change :≤±5% DF change (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit

FDC series

Outline Drawing



D	L	h	P	T	M1	M
±2.0	±2.0	±1.0	±1.0	Female Terminal	Male Terminal	Mounting
mm	mm	mm	mm			Stud
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.
* Specification are subject to change, please refer to approved data sheets.

FDC series

Technical data (Male terminals)

Cap Value	Vdc	Dimensions			Irms	Peak	ESR	ESL	Thermal Res	dv/dt	Pkg Qty	Part Number
μF		D mm	L mm	P mm	10KHz 50°C A	Current A	1KHz mΩ	nH	°C/W	V/us	pcs	
650	600	86.0	105.0	32.0	70.0	3900	1.2	60	5.0	6.0	8	FDC2KK6575++CJ8A
800	600	86.0	142.5	32.0	75.0	6400	1.5	60	3.6	8.0	8	FDC2KK8075++CJ8A
1000	600	86.0	161.0	32.0	60.0	7500	1.0	65	3.7	7.5	8	FDC2KK1085++CJ8A
220	700	76.0	80.0	32.0	50.0	3080	2.6	40	7.2	14.0	12	FDC2MK2273++CJ8A
300	700	86.0	80.0	32.0	55.0	4200	2.4	40	6.5	14.0	8	FDC2MK3075++CJ8A
420	700	86.0	105.0	32.0	58.0	2940	2.5	50	4.2	7.0	8	FDC2MK4275++CJ8A
450	700	86.0	126.0	32.0	65.0	3150	2.3	50	4.6	7.0	8	FDC2MK4575++CJ8A
550	700	86.0	142.5	32.0	65.0	3300	2.5	60	4.1	6.0	8	FDC2MK5575++CJ8A
290	800	76.0	105.0	32.0	50.0	3045	4.0	60	4.0	10.5	12	FDC2NK2973++CJ8A
300	800	86.0	105.0	32.0	60.0	2550	2.5	60	3.8	8.5	8	FDC2NK3075++CJ8A
390	800	86.0	105.0	32.0	62.0	3315	2.9	60	3.6	8.5	8	FDC2NK3975++CJ8A
450	800	86.0	142.5	32.0	65.0	3600	2.4	60	3.2	8.0	8	FDC2NK4575++CJ8A
460	800	86.0	151.0	50.0	70.0	3680	2.3	50	3.4	8.0	8	FDC2NK4675++CJ8A
850	800	86.0	205.0	50.0	60.0	4250	1.8	50	3.6	5.0	8	FDC2NK8575++CJ8A
1000	800	116.0	155.0	50.0	65.0	7000	1.8	60	2.6	7.0	5	FDC2NK1089++CR8A
1600	800	116.0	180.0	50.0	75.0	9600	3.0	65	3.4	6.0	5	FDC2NK1689++CR8A
480	900	86.0	142.5	32.0	65.0	4080	2.0	50	4.2	8.5	8	FDC2QK4875++CJ8A
1000	900	116.0	155.0	50.0	68.0	7000	1.6	80	3.0	7.0	5	FDC2QK1089++CR8A
1500	900	116.0	185.0	50.0	60.0	12000	2.0	65	4.8	8.0	5	FDC2QK1589++CR8A
1800	900	116.0	235.0	50.0	100.0	14400	0.8	60	2.4	8.0	5	FDC2QK1889++CR8A
900	1000	116.0	155.0	50.0	72.0	10800	2.9	85	2.6	12.0	5	FDC3KK9079++CR8A
1300	1000	116.0	230.0	50.0	100.0	9750	1.5	100	2.4	7.5	5	FDC3KK1389++CR8A
1600	1000	116.0	230.0	50.0	100.0	8000	1.5	75	2.1	5.0	5	FDC3KK1689++CR8A
170	1100	76.0	105.0	32.0	50.0	1700	3.2	60	3.8	10.0	12	FDC3MK1773++CR8A
240	1100	86.0	105.0	32.0	55.0	3000	1.7	50	3.8	12.5	8	FDC3MK2475++CJ8A
300	1100	86.0	142.5	32.0	58.0	2550	2.0	60	2.7	8.5	8	FDC3MK3075++CJ8A
330	1100	86.0	142.5	32.0	60.0	2805	3.0	60	3.3	8.5	8	FDC3MK3375++CJ8A
400	1100	86.0	142.5	32.0	60.0	3400	2.8	60	3.3	8.5	8	FDC3MK4075++CJ8A
420	1100	86.0	142.5	32.0	58.0	3570	2.3	85	3.0	8.5	8	FDC3MK4275++CJ8A
500	1100	86.0	180.0	32.0	72.0	6000	1.5	80	3.0	12.0	8	FDC3MK5075++CJ8A
600	1100	86.0	225.0	32.0	65.0	6300	2.5	60	2.0	10.5	8	FDC3MK6075++CJ8A
720	1100	116.0	155.0	50.0	69.0	9360	3.2	85	2.6	13.0	5	FDC3MK7279++CR8A
800	1100	116.0	170.0	50.0	80.0	8800	1.5	55	2.4	11.0	5	FDC3MK8079++CR8A
1000	1100	116.0	205.0	50.0	85.0	10000	2.2	50	2.5	10.0	5	FDC3MK1089++CR8A
1100	1100	116.0	235.0	50.0	90.0	9900	1.3	60	2.1	9.0	5	FDC3MK1189++CR8A
1600	1100	116.0	340.0	50.0	100.0	12000	2.3	100	2.4	7.5	5	FDC3MK1689++CR8A
1700	1100	136.0	235.0	50.0	110.0	10200	1.5	60	1.7	6.0	2	FDC3MK1780++CR8A
2000	1100	136.0	265.0	50.0	120.0	12000	1.2	60	1.3	6.0	2	FDC3MK2080++CR8A
2200	1100	136.0	340.0	50.0	120.0	13200	1.2	60	1.0	6.0	2	FDC3MK2280++CR8A
420	1200	86.0	178.5	32.0	60.0	4200	3.0	70	3.2	10.0	8	FDC3BK4275++CJ8A
540	1200	86.0	225.0	32.0	60.0	5400	2.5	85	3.3	10.0	8	FDC3BK5475++CJ8A
950	1200	116.0	235.0	50.0	90.0	9500	1.5	75	2.1	10.0	5	FDC3BK9579++CR8A
1000	1200	116.0	235.0	50.0	90.0	10000	1.5	75	2.1	10.0	5	FDC3BK1089++CR8A
1200	1200	116.0	265.0	50.0	70.0	12000	0.8	50	1.5	10.0	5	FDC3BK1289++CR8A
250	1300	86.0	142.5	32.0	40.0	2000	4.0	85	5.4	8.0	8	FDC3SK2575++CJ8A
330	1300	86.0	180.0	32.0	55.0	4950	2.6	80	3.4	15.0	8	FDC3SK3375++CJ8A
420	1300	116.0	105.0	32.0	50.0	6300	2.3	40	2.1	15.0	5	FDC3SK4279++CR8A
470	1300	116.0	161.0	50.0	65.0	5640	1.5	80	7.1	12.0	5	FDC3SK4779++CR8A
1100	1300	116.0	330.0	50.0	85.0	9900	2.7	200	2.1	9.0	5	FDC3SK1189++CR8A

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

FDC series

Technical data (Female terminals)

Cap		Dimensions			Irms	Peak	ESR	ESL	Thermal	dv/dt	Pkg	Part
Value	Vdc	D	L	P	10KHz 50°C	Current	1KHz		Res		Qty	Number
μF		mm	mm	mm	A	A	mΩ	nH	°C/W	V/us	pcs	
650	600	86.0	105.0	32.0	70.0	3900	1.2	60	5.0	6.0	8	FDC2KK6575++JJ65
800	600	86.0	142.5	32.0	75.0	6400	1.5	60	3.6	8.0	8	FDC2KK8075++JJ65
1000	600	86.0	161.0	32.0	60.0	7500	1.0	65	3.7	7.5	8	FDC2KK1085++JJ65
220	700	76.0	80.0	32.0	50.0	3080	2.6	40	7.2	14.0	12	FDC2MK2273++JJ65
300	700	86.0	80.0	32.0	55.0	4200	2.4	40	6.5	14.0	8	FDC2MK3075++JJ65
420	700	86.0	105.0	32.0	58.0	2940	2.5	50	4.2	7.0	8	FDC2MK4275++JJ65
450	700	86.0	126.0	32.0	65.0	3150	2.3	50	4.6	7.0	8	FDC2MK4575++JJ65
550	700	86.0	142.5	32.0	65.0	3300	2.5	60	4.1	6.0	8	FDC2MK5575++JJ65
290	800	76.0	105.0	32.0	50.0	3045	4.0	60	4.0	10.5	12	FDC2NK2973++JJ65
300	800	86.0	105.0	32.0	60.0	2550	2.5	60	3.8	8.5	8	FDC2NK3075++JJ65
390	800	86.0	105.0	32.0	62.0	3315	2.9	60	3.6	8.5	8	FDC2NK3975++JJ65
450	800	86.0	142.5	32.0	65.0	3600	2.4	60	3.2	8.0	8	FDC2NK4575++JJ65
460	800	86.0	151.0	50.0	70.0	3680	2.3	50	3.4	8.0	8	FDC2NK4675++JJ65
850	800	86.0	205.0	50.0	60.0	4250	1.8	50	3.6	5.0	8	FDC2NK8575++JJ65
1000	800	116.0	155.0	50.0	65.0	7000	1.8	60	2.6	7.0	5	FDC2NK1089++JR65
1600	800	116.0	180.0	50.0	75.0	9600	3.0	65	3.4	6.0	5	FDC2NK1689++JR65
480	900	86.0	142.5	32.0	65.0	4080	2.0	50	4.2	8.5	8	FDC2QK4875++JJ65
1000	900	116.0	155.0	50.0	68.0	7000	1.6	80	3.0	7.0	5	FDC2QK1089++JR65
1500	900	116.0	185.0	50.0	60.0	12000	2.0	65	4.8	8.0	5	FDC2QK1589++JR65
1800	900	116.0	235.0	50.0	100.0	14400	0.8	60	2.4	8.0	5	FDC2QK1889++JR65
900	1000	116.0	155.0	50.0	72.0	10800	2.9	85	2.6	12.0	5	FDC3KK9079++JR65
1300	1000	116.0	230.0	50.0	100.0	9750	1.5	100	2.4	7.5	5	FDC3KK1389++JR65
1600	1000	116.0	230.0	50.0	100.0	8000	1.5	75	2.1	5.0	5	FDC3KK1689++JR65
170	1100	76.0	105.0	32.0	50.0	1700	3.2	60	3.8	10.0	12	FDC3MK1773++JR65
240	1100	86.0	105.0	32.0	55.0	3000	1.7	50	3.8	12.5	8	FDC3MK2475++JJ65
300	1100	86.0	142.5	32.0	58.0	2550	2.0	60	2.7	8.5	8	FDC3MK3075++JJ65
330	1100	86.0	142.5	32.0	60.0	2805	3.0	60	3.3	8.5	8	FDC3MK3375++JJ65
400	1100	86.0	142.5	32.0	60.0	3400	2.8	60	3.3	8.5	8	FDC3MK4075++JJ65
420	1100	86.0	142.5	32.0	58.0	3570	2.3	85	3.0	8.5	8	FDC3MK4275++JJ65
500	1100	86.0	180.0	32.0	72.0	6000	1.5	80	3.0	12.0	8	FDC3MK5075++JJ65
600	1100	86.0	225.0	32.0	65.0	6300	2.5	60	2.0	10.5	8	FDC3MK6085++JJ65
720	1100	116.0	155.0	50.0	69.0	9360	3.2	85	2.6	13.0	5	FDC3MK7279++JR65
800	1100	116.0	170.0	50.0	80.0	8800	1.5	55	2.4	11.0	5	FDC3MK8079++JR65
1000	1100	116.0	205.0	50.0	85.0	10000	2.2	50	2.5	10.0	5	FDC3MK1089++JR65
1100	1100	116.0	235.0	50.0	90.0	9900	1.3	60	2.1	9.0	5	FDC3MK1189++JR65
1600	1100	116.0	340.0	50.0	100.0	12000	2.3	100	2.4	7.5	5	FDC3MK1689++JR65
1700	1100	136.0	235.0	50.0	110.0	10200	1.5	60	1.7	6.0	2	FDC3MK1780++JR65
2000	1100	136.0	265.0	50.0	120.0	12000	1.2	60	1.3	6.0	2	FDC3MK2080++JR65
2200	1100	136.0	340.0	50.0	120.0	13200	1.2	60	1.0	6.0	2	FDC3MK2280++JR65
420	1200	86.0	178.5	32.0	60.0	4200	3.0	70	3.2	10.0	8	FDC3BK4275++JJ65
540	1200	86.0	225.0	32.0	60.0	5400	2.5	85	3.3	10.0	8	FDC3BK5475++JJ65
950	1200	116.0	235.0	50.0	90.0	9500	1.5	75	2.1	10.0	5	FDC3BK9579++JR65
1000	1200	116.0	235.0	50.0	90.0	10000	1.5	75	2.1	10.0	5	FDC3BK1089++JR65
1200	1200	116.0	265.0	50.0	70.0	12000	0.8	50	1.5	10.0	5	FDC3BK1289++JR65
250	1300	86.0	142.5	32.0	40.0	2000	4.0	85	5.4	8.0	8	FDC3SK2575++JJ65
330	1300	86.0	180.0	32.0	55.0	4950	2.6	80	3.4	15.0	8	FDC3SK3375++JJ65
420	1300	116.0	105.0	32.0	50.0	6300	2.3	40	2.1	15.0	5	FDC3SK4279++JR65
470	1300	116.0	161.0	50.0	65.0	5640	1.5	80	7.1	12.0	5	FDC3SK4779++JR65
1100	1300	116.0	330.0	50.0	85.0	9900	2.7	200	2.1	9.0	5	FDC3SK1189++JR65

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

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 $Pj=Rs*Irms^2$

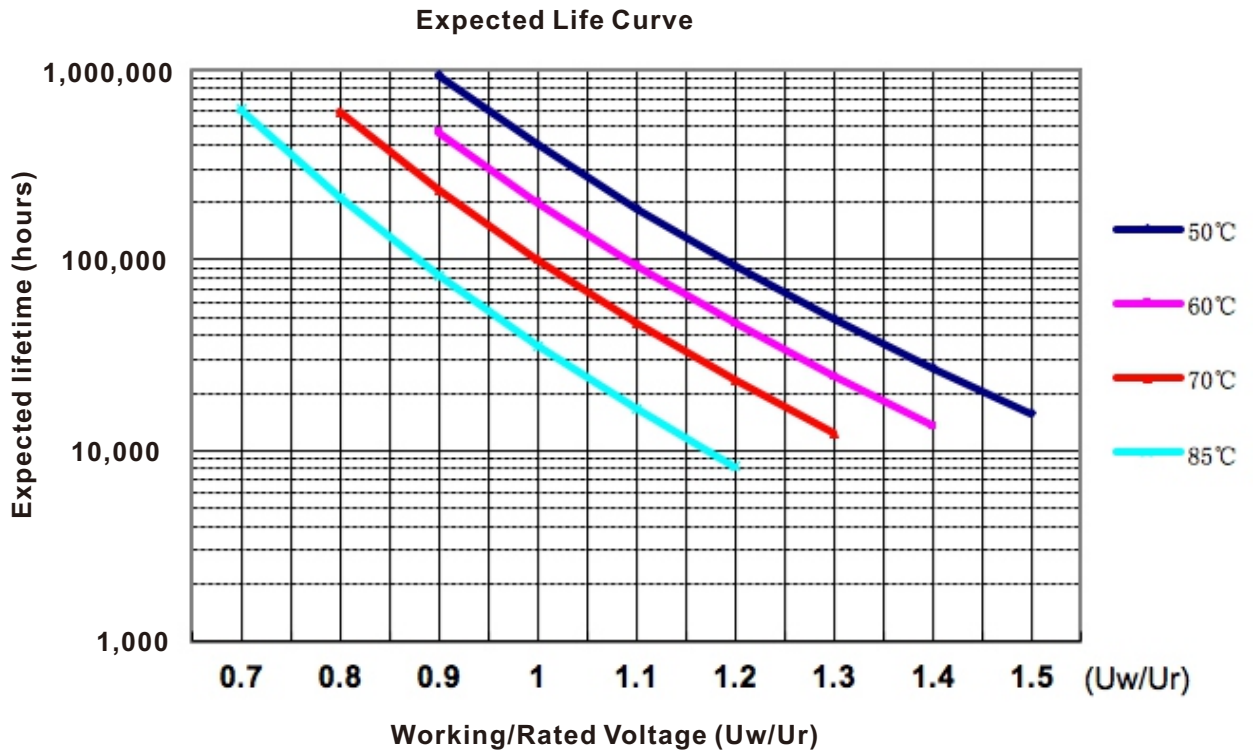
Pd: Dielectric losses

$$Pd= Xc*Irms^2*\tan\delta= Irms^2 / (2*\pi*f*C)*\tan\delta$$

T_{hs}: Hot spot temperature within the capacitor

$$T_{hs} = Ta + (Pj+ Pd)*Rth$$

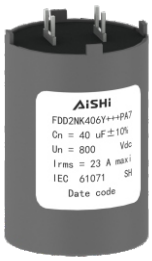
Design life: 100,000 hours at Un @ Hot-Spot temperature ≤+70°C



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.

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

- High performance DC filtering applications.
- Frequency converters, industrial power supplies.
- Welders, elevators, motor driver systems.

Features

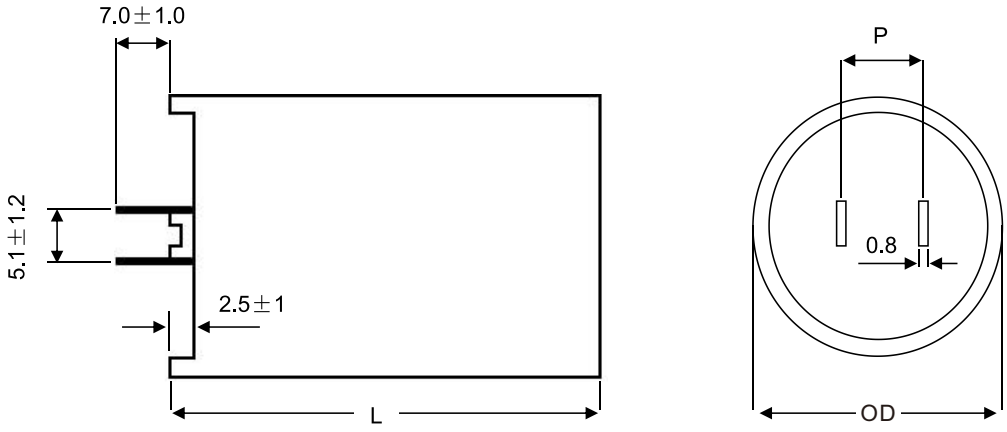
- High ripple current
- Self-healing property
- Low losses
- High capacitance density
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

Specifications

Items	Characteristics
Application	DC Filtering / DC Link
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068–1
Operating Temperature Range	-40°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 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 (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} 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%

FDD series

Outline Drawing



Dimensions - Case:

Unit: mm

Case Code	OD	L	P	P1
	±1.0	±1.0	±1.0	±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	Dimensions		P	Irms			Peak	ESR	ESL	Thermal	dv/dt	Part Number
	Value	OD	L		100KHz			Current	100KHz		Res		
	μF	mm	mm	mm	25°C A	50°C A	70°C A	A	mΩ	nH	°C/W	V/us	
500.0	35.0	36.0	54.0	12.7	22.0	18.5	13.0	1050	8.0	25	8.6	30.0	FDD2HK356Y+++PA7
500.0	80.0	50.0	63.0	12.7	30.0	25.5	13.5	2400	6.0	25	8.2	30.0	FDD2HK806Y+++PA7
500.0	100.0	50.0	63.0	12.7	35.0	28.0	14.5	3000	5.8	25	7.9	30.0	FDD2HK107Y+++PA7
600.0	30.0	36.0	54.0	12.7	22.0	18.0	12.0	900	9.0	25	9.8	30.0	FDD2KK306Y+++PA7
600.0	80.0	50.0	63.0	12.7	32.0	25.0	14.0	2400	6.8	25	9.5	30.0	FDD2KK806Y+++PA7
700.0	20.0	36.0	54.0	12.7	20.0	16.0	10.0	800	10.0	25	10.8	40.0	FDD2MK206Y+++PA7
700.0	50.0	50.0	63.0	12.7	30.0	24.0	12.0	2000	7.0	25	9.4	40.0	FDD2MK506Y+++PA7
800.0	15.0	36.0	54.0	12.7	19.0	15.0	10.0	750	10.0	25	10.5	50.0	FDD2NK156Y+++PA7
800.0	40.0	50.0	63.0	12.7	28.0	23.0	12.0	2000	7.5	25	9.5	50.0	FDD2NK406Y+++PA7
800.0	60.0	51.0	51.0	12.7	33.0	27.0	16.0	3000	4.0	25	6.5	50.0	FDD2NK606Y+++PA7
800.0	60.0	50.0	63.0	12.7	33.0	27.0	16.0	3000	4.0	25	6.5	50.0	FDD2NJ606Y+++PA7
800.0	90.0	56.5	63.0	12.7	36.0	29.0	20.0	4500	3.0	25	5.0	50.0	FDD2NK906Y+++PA7
800.0	90.0	63.5	51.5	12.7	36.0	29.0	20.0	4500	3.0	25	5.0	50.0	FDD2NJ906Y+++PA7
900.0	14.0	36.0	54.0	12.7	18.0	15.0	9.5	700	10.5	25	10.5	50.0	FDD2QK146Y+++PA7
900.0	35.0	50.0	63.0	12.7	27.0	22.0	11.5	1750	8.0	25	9.5	50.0	FDD2QK356Y+++PA7
1000.0	10.0	36.0	54.0	12.7	18.0	14.0	9.0	500	12.0	25	10.5	50.0	FDD3KK106Y+++PA7
1000.0	25.0	50.0	63.0	12.7	27.0	22.0	11.5	1250	8.5	25	9.5	50.0	FDD3KK256Y+++PA7
1200.0	8.0	36.0	54.0	12.7	16.0	12.0	8.5	400	13.5	25	10.8	50.0	FDD3BK805Y+++PA7
1200.0	20.0	50.0	63.0	12.7	26.0	21.0	11.0	1000	9.0	25	9.5	50.0	FDD3BK206Y+++PA7

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

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 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 : 21 days
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤50 X 10^{-4} 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%

FDE series

Terminal Configuration

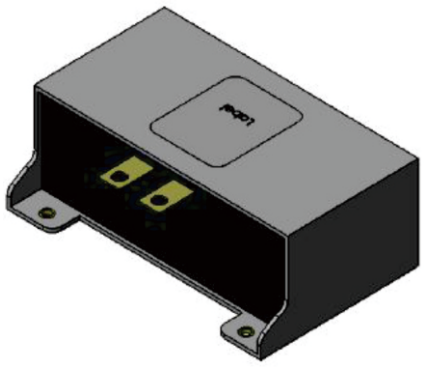


Fig.1a - for Infineon HybridPACK ™1 IGBT

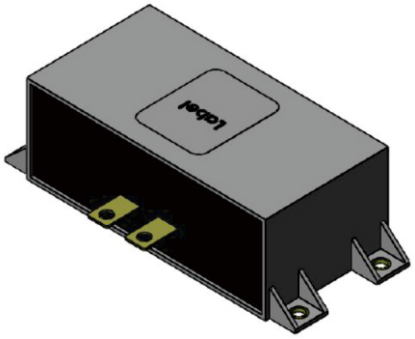


Fig.1b - for Infineon HybridPACK™1 IGBT
With side mounting brackets

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

Ordering Code	Cn μF	Vndc V	Imax A	Lself n H	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2WK307X12RNQN	300	450	120	30	0.8	0.9	2.7	$10*10^{-4}$	140*72*50	0.8	1a
FDE2WK467X12RNQN	460	450	150	25	0.6	1.5	5.0	$10*10^{-4}$	140*72*50	0.8	1a
FDE2WK567X12RNQN	560	450	150	25	0.6	1.8	5.6	$10*10^{-4}$	140*72*50	0.8	1a
FDE2WK407X12RNQN	400	450	120	25	0.8	1.4	4.4	$10*10^{-4}$	140*72*50	0.8	1a
FDE2WK507X12RNQN	500	450	120	25	0.8	1.6	5.0	$10*10^{-4}$	140*72*50	0.8	1a
FDE2WK467X13RNQN	460	450	150	25	0.6	1.5	5.0	$10*10^{-4}$	140*72*50	0.8	1b
FDE2WK567X13RNQN	560	450	150	25	0.6	1.8	5.6	$10*10^{-4}$	140*72*50	0.8	1b
FDE2WK407X13RNQN	400	450	120	25	0.8	1.4	4.4	$10*10^{-4}$	140*72*50	0.8	1b
FDE2WK507X13RNQN	500	450	120	25	0.8	1.6	5.0	$10*10^{-4}$	140*72*50	0.8	1b

Notes:

1) I max: considering maximum hot spot temperature at 105 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

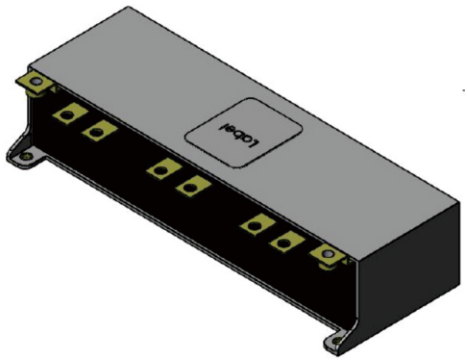


Fig.2a - for Infineon HybridPACK™2 IGBT

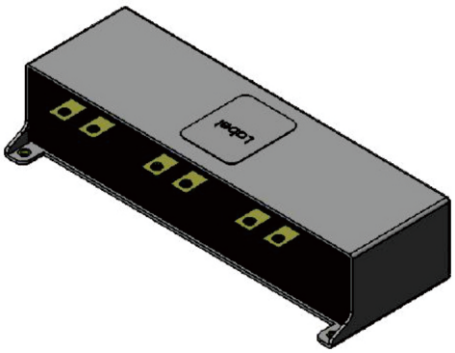


Fig.2b - for Infineon HybridPACK™2 IGBT

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

Ordering Code	Cn μF	Vndc V	Imax A	Lself nH	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2WK507X14RNTN	500	450	120	15	1.0	1.5	4.5	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK707X14RNTN	700	450	190	15	0.5	2.5	7.5	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK907X14RNTN	900	450	190	15	0.5	3.0	9.0	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK108X14RNTN	1000	450	190	15	0.5	3.2	10.0	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK507X14RNSN	500	450	170	15	0.7	1.8	5.5	$10*10^{-4}$	237*72*50	1.2	2b
FDE2WK707X14RNTN	700	450	170	15	0.7	2.8	8.4	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK707X14RNSN	700	450	170	15	0.7	2.8	8.4	$10*10^{-4}$	237*72*50	1.2	2b
FDE2WK857X14RNTN	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK857X14RNSN	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	2b
FDE2WK907X14RNTN	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	2a
FDE2WK907X14RNSN	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	2b

Notes:

1) I max: considering maximum hot spot temperature at 105 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

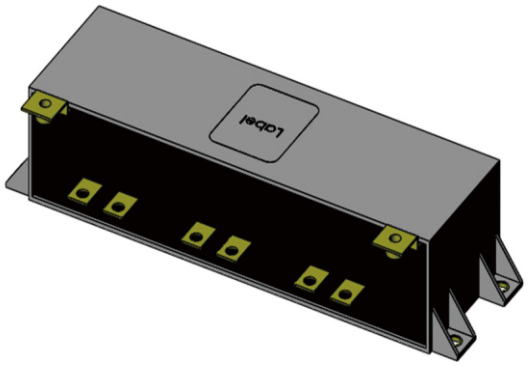


Fig.3a - for Infineon HybridPACK™2 IGBT with DC connectors and side mounting brackets

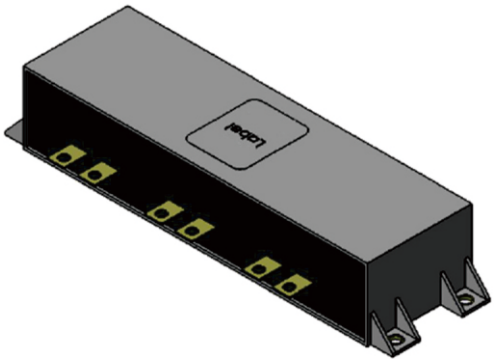


Fig.3b - for Infineon HybridPACK™2 IGBT with side mounting brackets

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

Ordering Code	Cn µF	Vndc V	Imax A	Lself nH	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2WK707X15RNTN	700	450	190	15	0.5	2.5	7.5	$10*10^{-4}$	237*72*50	1.2	3a
FDE2WK907X15RNTN	900	450	190	15	0.5	3.0	9.0	$10*10^{-4}$	237*72*50	1.2	3a
FDE2WK108X15RNTN	1000	450	190	15	0.5	3.2	10.0	$10*10^{-4}$	237*72*50	1.2	3a
FDE2WK507X15RNTN	500	450	170	15	0.7	1.8	5.5	$10*10^{-4}$	237*72*50	1.2	3a
FDE2WK507X15RNSN	500	450	170	15	0.7	1.8	5.5	$10*10^{-4}$	237*72*50	1.2	3b
FDE2WK707X15RNSN	700	450	170	15	0.7	2.8	8.4	$10*10^{-4}$	237*72*50	1.2	3b
FDE2WK857X15RNTN	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	3a
FDE2WK857X15RNSN	850	450	170	15	0.7	3.1	9.3	$10*10^{-4}$	237*72*50	1.2	3b
FDE2WK907X15RNTN	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	3a
FDE2WK907X15RNSN	900	450	170	15	0.7	3.3	9.9	$10*10^{-4}$	237*72*50	1.2	3b

Notes:

1) I max: considering maximum hot spot temperature at 105 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

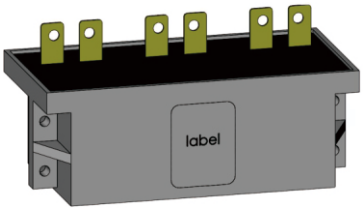


Fig.4a - for others IGBT

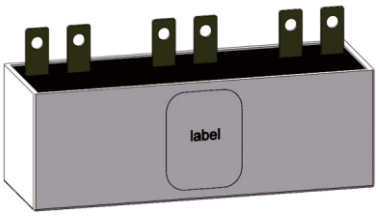


Fig.5a - for others IGBT

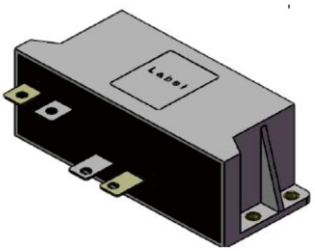


Fig.6a - for others IGBT

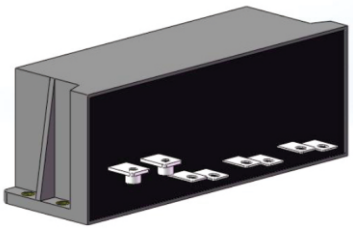


Fig.7a - for others IGBT

Ordering Code	Cn μF	Vndc V	Imax A	Lself nH	Rs mΩ	Ipk kA	Is kA	DF max 100Hz	Dimension LxHxW mm	Weight kg	Fig.
FDE2HK807X18RNSN	800	500	230	30	0.7	4	12	$10*10^{-4}$	194.5*69.5*100	1.5	Fig.4a
FDE2NK507X18RNSN	500	800	160	30	0.7	4	12	$10*10^{-4}$	194.5*69.5*100	1.5	Fig.4a
FDE2WK607X23RNSN	600	450	200	20	0.6	3	9	$10*10^{-4}$	180*60*60	1.0	Fig.5a
FDE2KK457X23RNSN	450	600	160	20	0.7	3	9	$10*10^{-4}$	180*60*60	1.0	Fig.5a
FDE2WK607X16RNRN	600	450	110	25	0.5	2	6	$10*10^{-4}$	170*72*65	1.0	Fig.6a
FDE2HK108X20RNTN	1000	500	150	30	0.4	4.5	13.5	$10*10^{-4}$	324*130*128	1.7	Fig.7a

Notes:

1) I max: considering maximum hot spot temperature at 105 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.1a

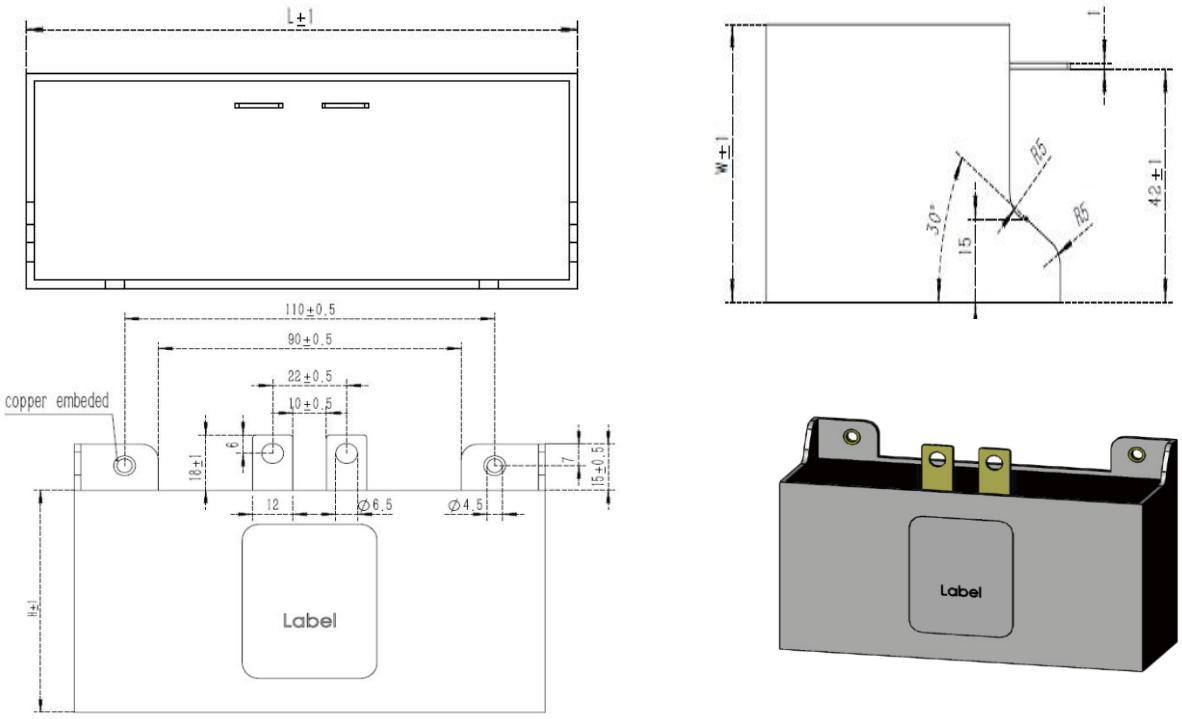
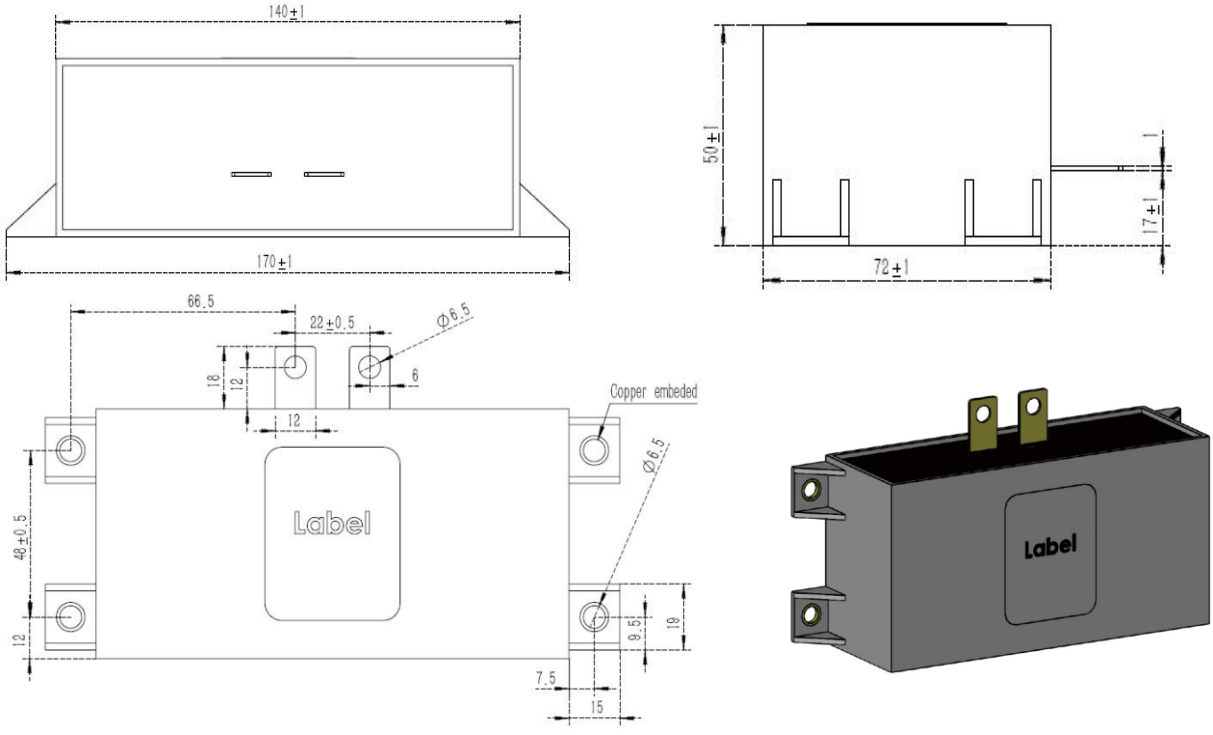


Fig.1b



FDE series

Terminal Configuration

Fig.2a

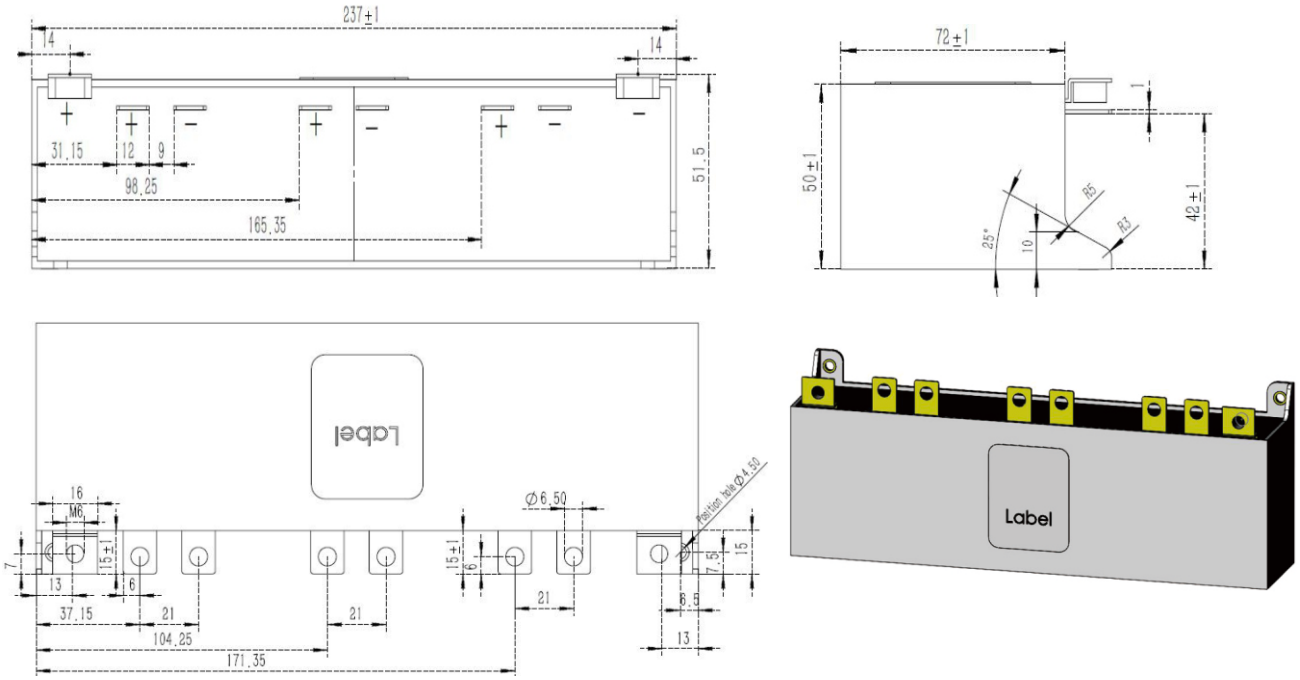
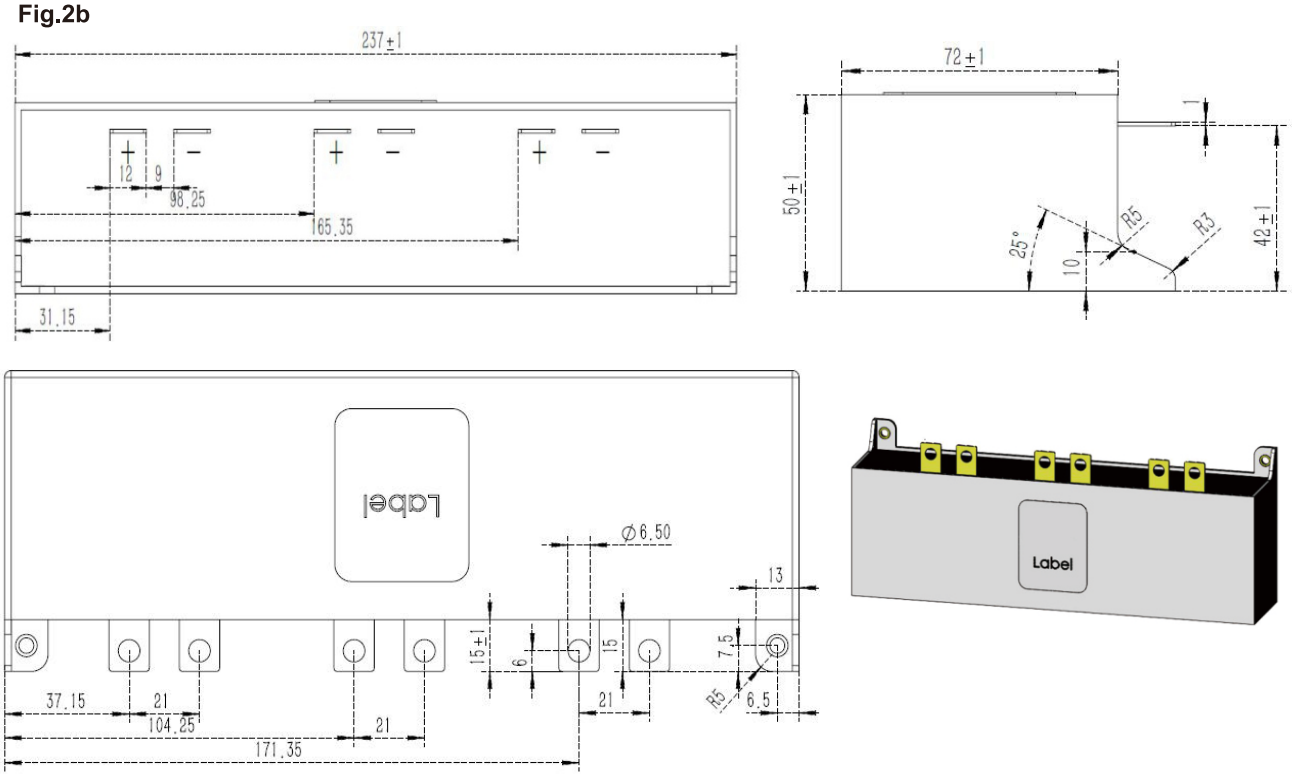


Fig.2b



FDE series

Terminal Configuration

Fig.3a

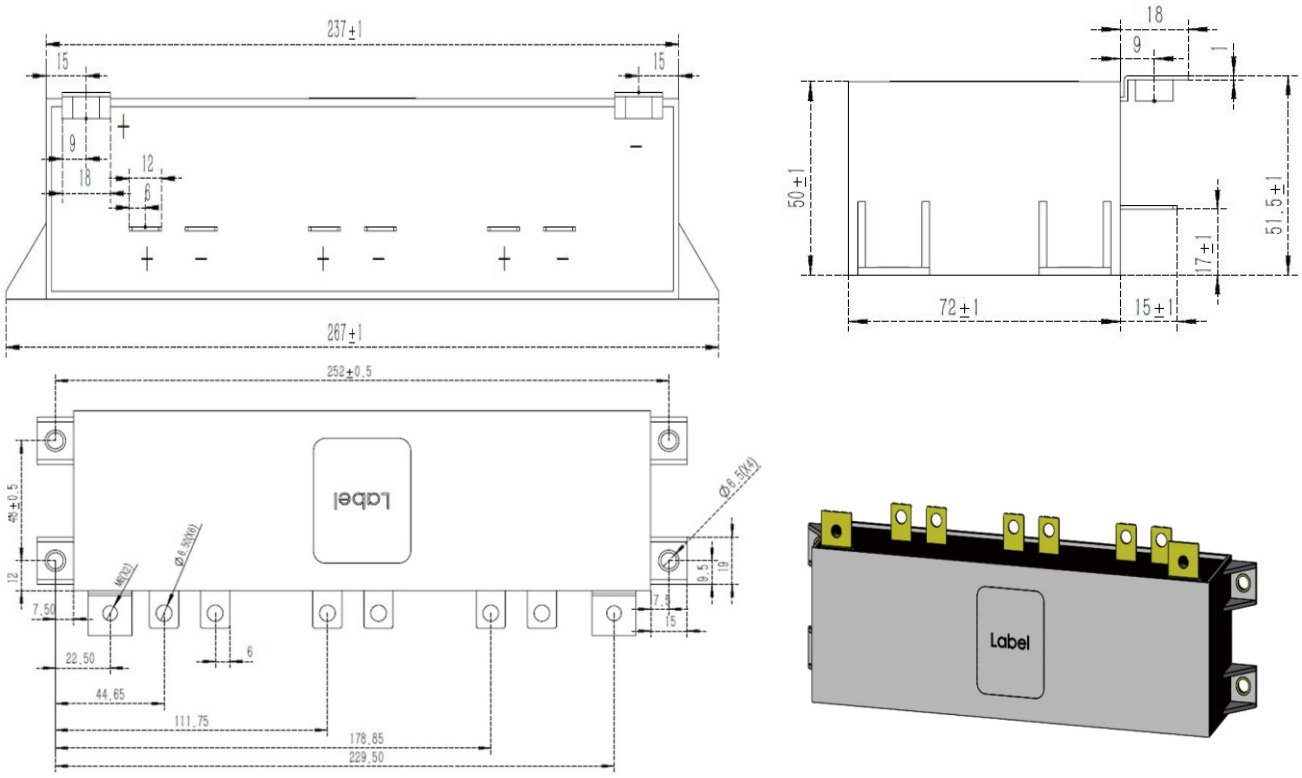
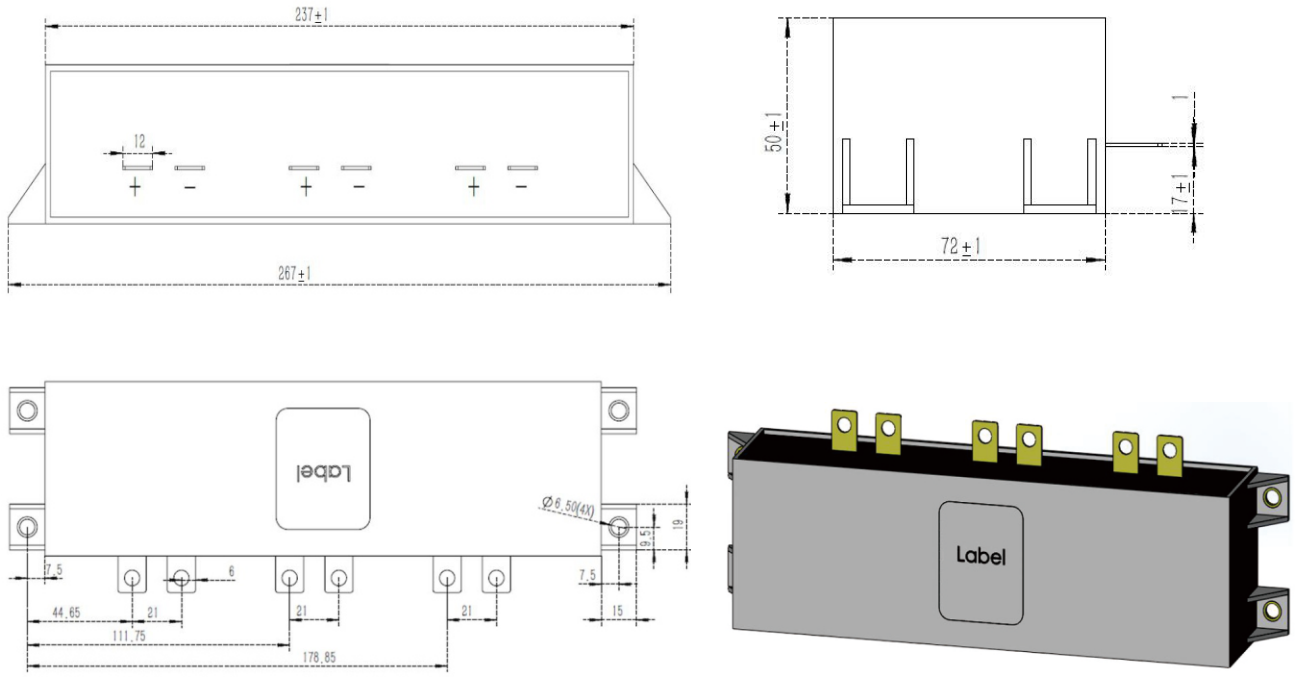


Fig.3b



FDE series

Terminal Configuration

Fig.4a

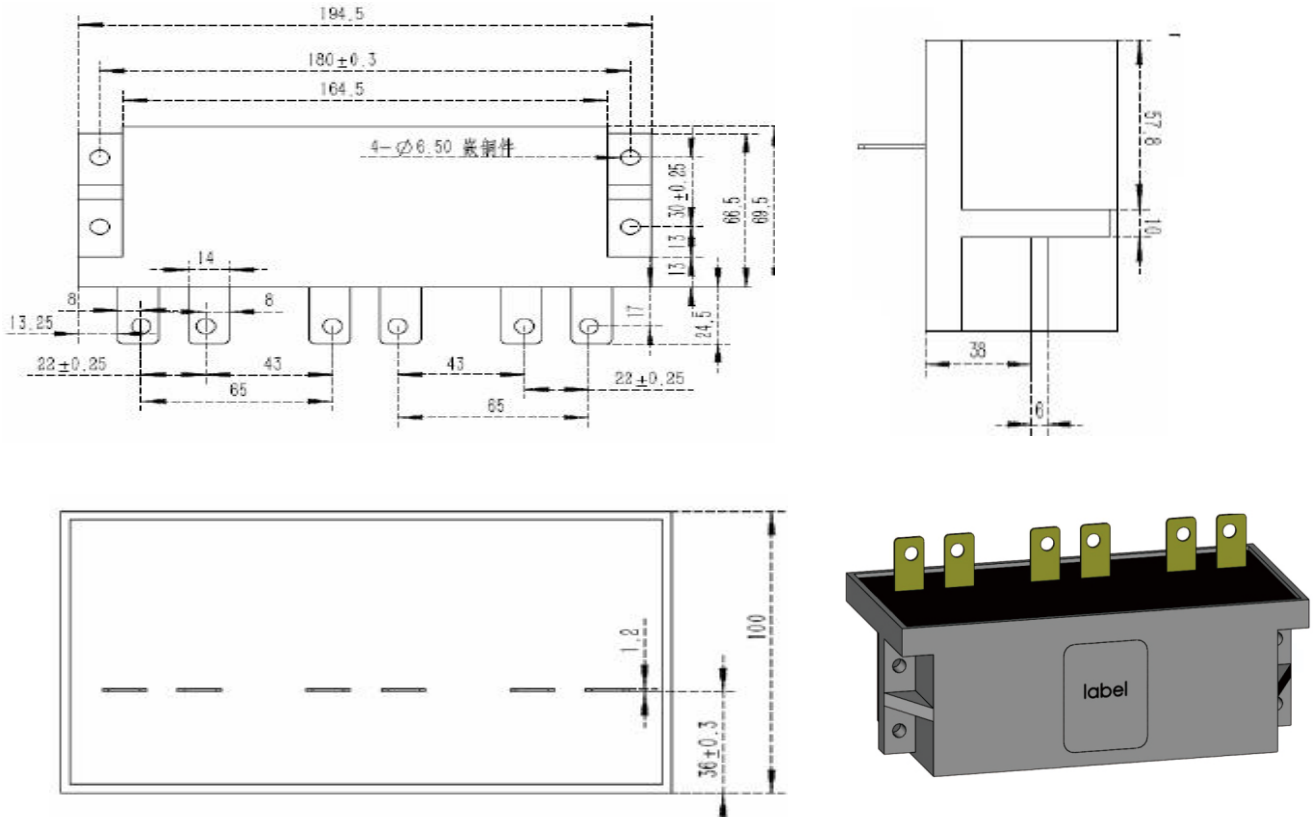
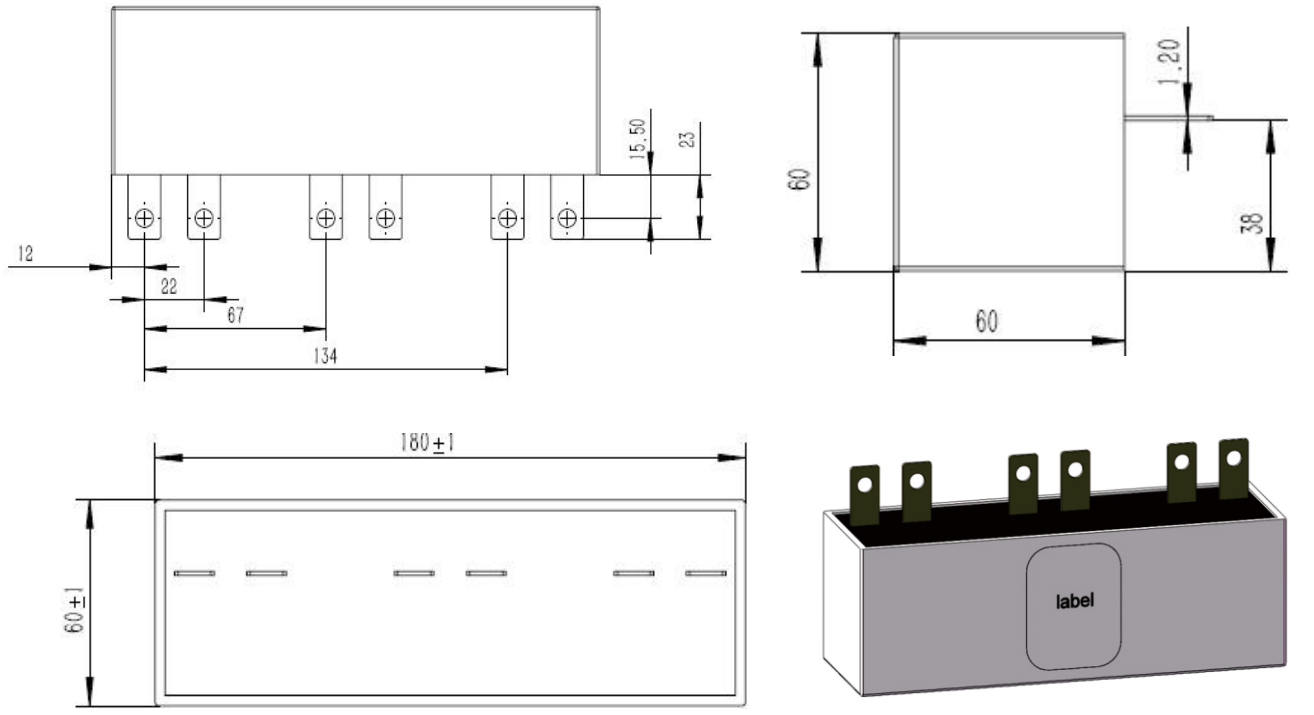


Fig.5a



FDE series

Terminal Configuration

Fig.6a

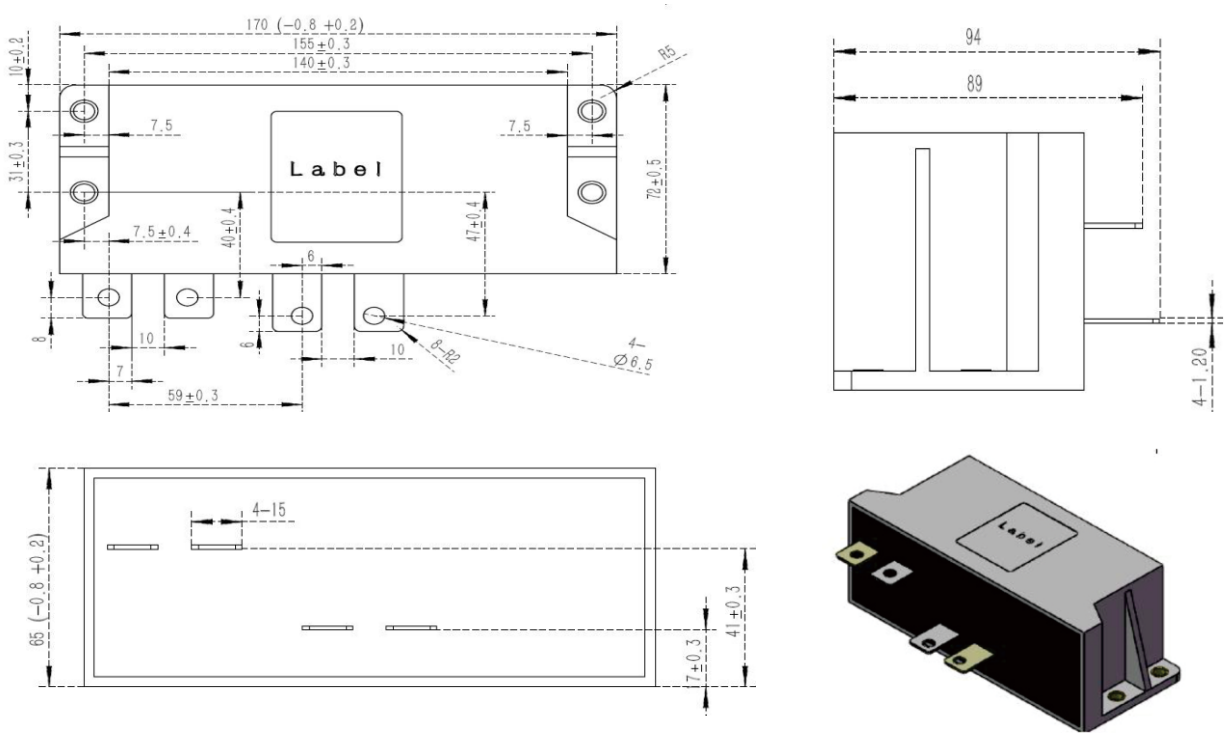
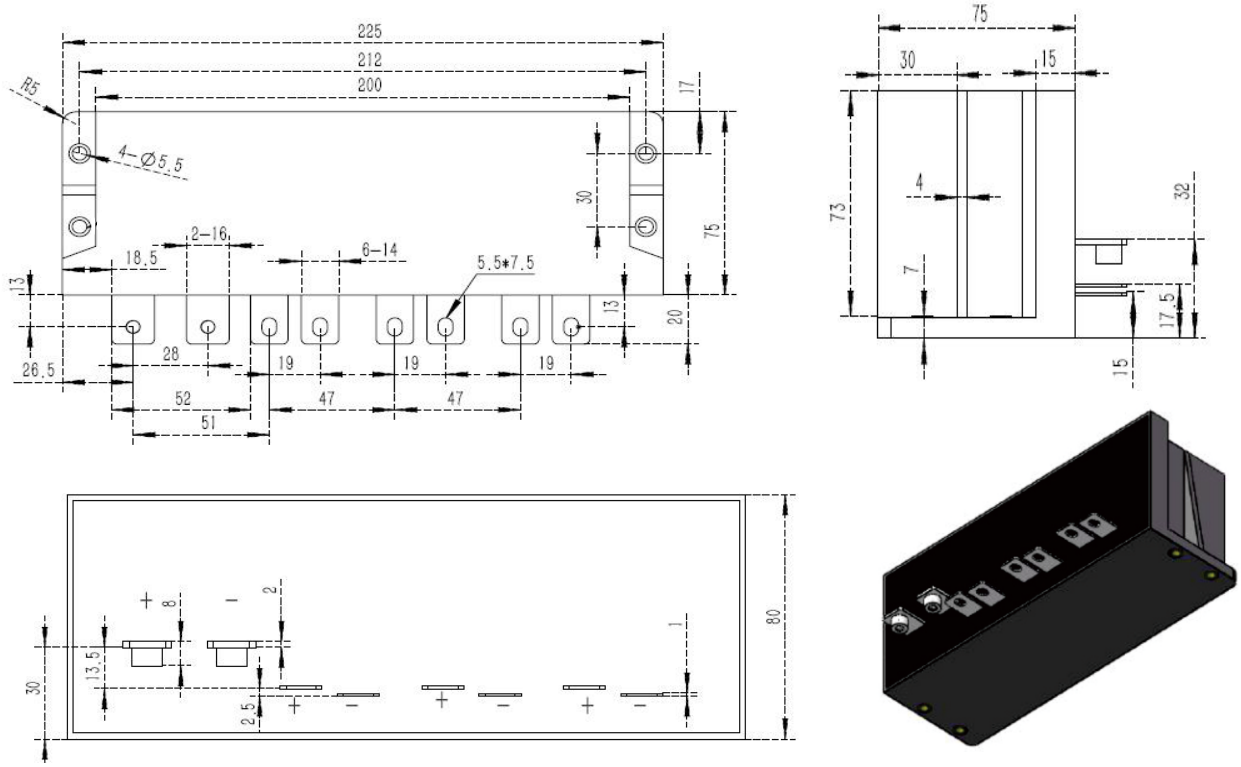
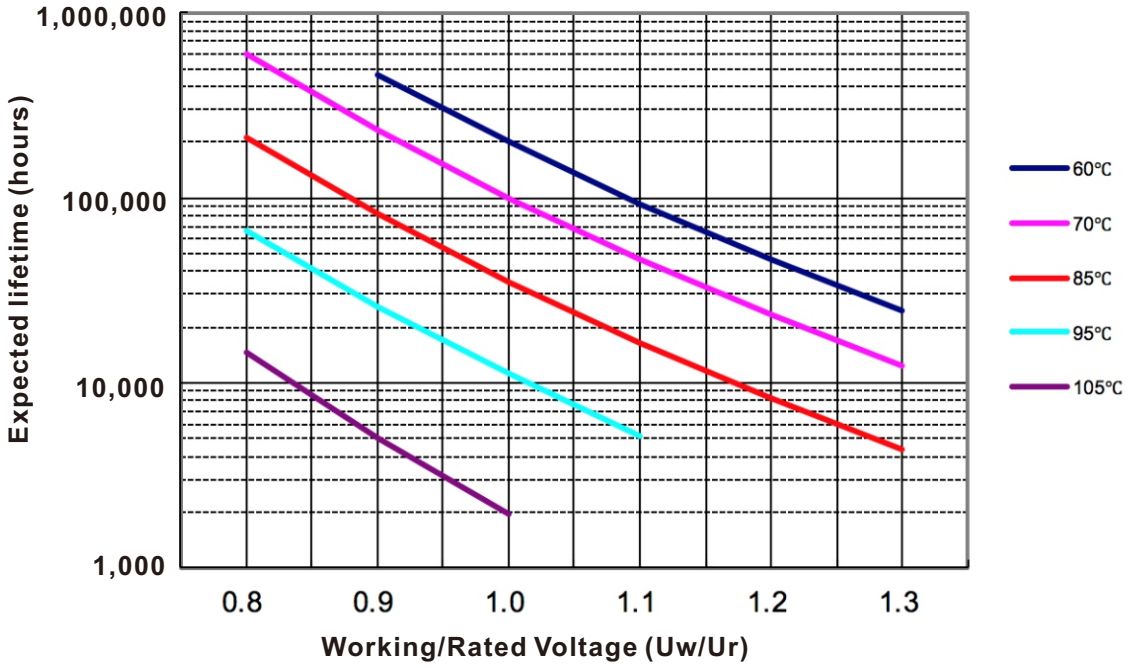


Fig.7a



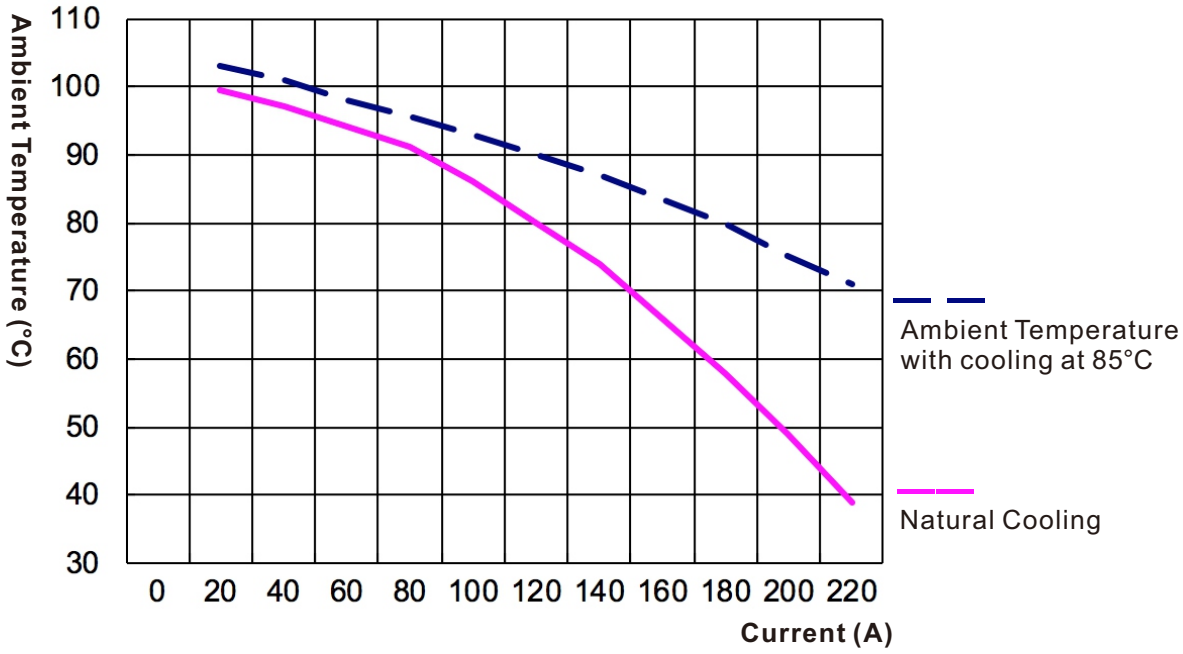
FDE series

Curve 1 Expected lifetime curves



Curve 2. Maximum ambient temperature curve

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



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

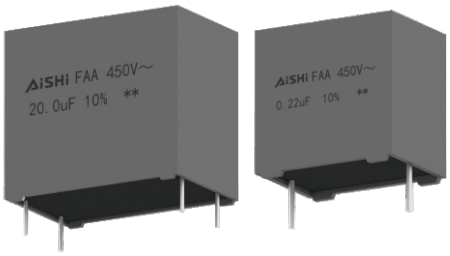
Ⅸ Moisture resistance

Ⅹ Temperature shock

Ⅺ High temperature storage

Ⅻ Endurance test

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

- Suitable for small power AC output filter.
- UPS systems, solar inverter, motor drivers.

Features

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

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 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 (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.25 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤40 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FAA series

Technical data

Vac	Cap	Dimensions			P	P1	Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part
	Value	W	H	T			10KHz	Current	Typical		Res		Wire	Number
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
160	1.0	32.0	20.0	11.0	27.5	\	5.0	32.0	30.3	24	19.8	32	0.8	FAA16K105G++2GL5
160	2.2	32.0	20.0	11.0	27.5	\	7.0	70.4	15.3	24	20.0	32	0.8	FAA16K225G++2GL5
160	3.3	32.0	22.0	13.0	27.5	\	7.0	105.6	11.3	24	27.1	32	0.8	FAA16K335G++2GL5
160	5.0	32.0	28.0	14.0	27.5	\	7.0	160.0	8.8	26	34.8	32	0.8	FAA16K505G++2GL5
160	10.0	32.0	33.0	18.0	27.5	\	7.0	320.0	6.8	26	45.0	32	0.8	FAA16K106G++2GL5
160	10.0	42.5	37.0	28.0	37.5	10.2	12.0	220.0	7.2	30	14.5	22	1.2	FAA16K106K++4KB5
160	20.0	42.5	37.0	28.0	37.5	10.2	12.0	440.0	6.9	30	15.1	22	1.2	FAA16K206K++4KB5
160	30.0	42.5	45.0	30.0	37.5	20.3	12.0	660.0	7.4	30	14.1	22	1.2	FAA16K306K++4KD5
160	40.0	57.5	45.0	30.0	52.5	20.3	12.0	640.0	7.6	35	13.7	16	1.2	FAA16K406M++4MD5
160	50.0	57.5	50.0	35.0	52.5	20.3	12.0	800.0	7.5	35	13.9	16	1.2	FAA16K506M++4MD5
250	1.0	32.0	20.0	11.0	27.5	\	8.0	40.0	14.0	24	16.7	40	0.8	FAA25K105G++2GL5
250	1.5	32.0	20.0	11.0	27.5	\	8.0	60.0	10.0	24	23.4	40	0.8	FAA25K155G++2GL5
250	2.0	32.0	22.0	13.0	27.5	\	9.0	80.0	8.2	24	22.6	40	0.8	FAA25K205G++2GL5
250	3.3	32.0	28.0	14.0	27.5	\	9.0	132.0	6.2	26	29.9	40	0.8	FAA25K335G++2GL5
250	4.0	32.0	33.0	18.0	27.5	\	9.0	160.0	5.9	26	31.4	40	0.8	FAA25K405G++2GL5
250	5.0	32.0	33.0	18.0	27.5	\	9.0	200.0	5.2	26	35.6	40	0.8	FAA25K505G++2GL5
250	6.8	42.5	37.0	22.0	37.5	10.2	14.0	272.0	4.9	28	15.6	40	1.2	FAA25K685K++4KB5
250	10.0	42.5	40.0	20.0	37.5	10.2	14.0	300.0	5.6	30	13.7	30	1.2	FAA25K106K++4KB5
250	15.0	42.5	37.0	28.0	37.5	10.2	14.0	450.0	5.2	30	14.7	30	1.2	FAA25K156K++4KB5
250	20.0	42.5	45.0	30.0	37.5	20.3	14.0	600.0	4.8	30	15.9	30	1.2	FAA25K206K++4KD5
250	25.0	57.5	45.0	30.0	52.5	20.3	14.0	625.0	5.7	35	13.4	25	1.2	FAA25K256M++4MD5
250	30.0	57.5	45.0	30.0	52.5	20.3	14.0	750.0	5.3	35	14.4	25	1.2	FAA25K306M++4MD5
250	35.0	57.5	50.0	35.0	52.5	20.3	14.0	875.0	5.5	35	13.9	25	1.2	FAA25K356M++4MD5
250	40.0	57.5	50.0	35.0	52.5	20.3	14.0	1000.0	5.2	35	14.7	25	1.2	FAA25K406M++4MD5
275	1.0	32.0	20.0	11.0	27.5	\	8.0	40.0	13.0	24	18	40	0.8	FAA27K105G++2GL5
275	3.3	32.0	33.0	18.0	27.5	\	9.0	132.0	6.2	26	29.9	40	0.8	FAA27K335G++2GL5
275	6.8	32.0	37.0	22.0	27.5	\	9.0	272.0	4.7	28	39.4	40	1.0	FAA27K685G++2GL5
275	10.0	42.5	40.0	20.0	37.5	10.2	14.0	300.0	5.9	30	13	30	1.2	FAA27K106K++4KB5
275	15.0	42.5	45.0	30.0	37.5	20.3	14.0	450.0	5.1	30	15	30	1.2	FAA27K156K++4KD5
275	20.0	57.5	45.0	30.0	52.5	20.3	14.0	500.0	6.0	35	12.8	25	1.2	FAA27K206M++4MD5
275	30.0	57.5	50.0	35.0	52.5	20.3	14.0	750.0	5.3	35	14.4	25	1.2	FAA27K306M++4MD5
350	0.68	32.0	20.0	11.0	27.5	\	8.0	30.6	15.0	24	15.6	45	0.8	FAA35K684G++2GL5
350	1.0	32.0	22.0	13.0	27.5	\	9.0	45.0	10.9	24	17	45	0.8	FAA35K105G++2GL5
350	2.0	32.0	33.0	18.0	27.5	\	9.0	90.0	7.3	26	25.4	45	0.8	FAA35K205G++2GL5
350	2.2	32.0	33.0	18.0	27.5	\	9.0	99.0	6.9	26	26.8	45	0.8	FAA35K225G++2GL5
350	3.3	32.0	37.0	22.0	27.5	\	9.0	148.5	5.7	28	32.5	45	1.0	FAA35K335G++2GL5
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	FAA35K475K++4KB5
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	FAA35K505K++4KB5
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	FAA35K685K++4KB5
350	10.0	42.5	45.0	30.0	37.5	20.3	14.0	340.0	5.3	30	14.4	34	1.2	FAA35K106K++4KD5
350	12.0	57.5	45.0	30.0	52.5	20.3	14.0	336.0	6.8	35	11.3	28	1.2	FAA35K126M++4MD5
350	20.0	57.5	50.0	35.0	52.5	20.3	14.0	560.0	5.9	35	13	28	1.2	FAA35K206M++4MD5

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

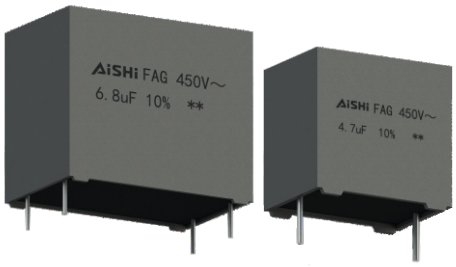
FAA series

Technical data

Vac	Cap	Dimensions			P	P1	Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	Typical		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
400	0.47	32.0	20.0	11.0	27.5	\	7.0	23.5	18.6	24	16.5	50	0.8	FAA40K474G++2GL5
400	1.00	32.0	28.0	14.0	27.5	\	9.0	50.0	10.3	26	18.0	50	0.8	FAA40K105G++2GL5
400	1.50	32.0	33.0	18.0	27.5	\	9.0	75.0	8.1	26	22.9	50	0.8	FAA40K155G++2GL5
400	2.20	32.0	33.0	18.0	27.5	\	9.0	110.0	6.4	26	28.9	50	0.8	FAA40K225G++2GL5
400	3.00	32.0	37.0	22.0	27.5	\	9.0	150.0	5.7	28	32.5	50	1.0	FAA40K305G++2GL5
400	5.00	42.5	37.0	28.0	37.5	10.2	14.0	200.0	6.2	30	12.3	40	1.2	FAA40K505K++4KB5
400	10.00	57.5	45.0	30.0	52.5	20.3	14.0	350.0	6.9	35	11.1	35	1.2	FAA40K106M++4MD5
400	15.00	57.5	50.0	35.0	52.5	20.3	14.0	525.0	6.1	35	12.5	35	1.2	FAA40K156M++4MD5
450	0.22	32.0	20.0	11.0	27.5	\	5.0	12.1	30.9	24	19.4	55	0.8	FAA45K224G++2GL5
450	0.47	32.0	22.0	13.0	27.5	\	8.0	25.9	15.7	24	14.9	55	0.8	FAA45K474G++2GL5
450	1.00	32.0	33.0	18.0	27.5	\	8.0	55.0	9.2	26	25.5	55	0.8	FAA45K105G++2GL5
450	1.50	32.0	37.0	22.0	27.5	\	8.0	82.5	7.3	28	32.1	55	1.0	FAA45K155G++2GL5
450	3.30	42.5	37.0	28.0	37.5	10.2	14.0	148.5	7.4	30	10.3	45	1.2	FAA45K335K++4KB5
450	4.70	42.5	45.0	30.0	37.5	20.3	14.0	211.5	6.2	30	12.3	45	1.2	FAA45K475K++4KD5
450	6.80	57.5	45.0	30.0	52.5	20.3	14.0	258.4	7.5	35	10.2	38	1.2	FAA45K685M++4MD5
450	10.00	57.5	50.0	35.0	52.5	20.3	14.0	380.0	6.6	35	11.6	38	1.2	FAA45K106M++4MD5

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

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

- Suitable for small power AC output filter.
- UPS systems, solar inverter, motor drivers.

Features

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

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 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 (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.25 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤ ±5% DF change (△tgδ):≤40 X 10^{-4} 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%

FAG series

Technical data

Vac	Cap	Dimensions			P	P1	Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	Typical		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
160	1.0	32.0	20.0	11.0	27.5	\	5.0	32.0	30.3	24	19.8	32	0.8	FAG16K105G++2GL5
160	2.2	32.0	20.0	11.0	27.5	\	7.0	70.4	15.3	24	20.0	32	0.8	FAG16K225G++2GL5
160	3.3	32.0	22.0	13.0	27.5	\	7.0	105.6	11.3	24	27.1	32	0.8	FAG16K335G++2GL5
160	5.0	32.0	28.0	14.0	27.5	\	7.0	160.0	8.8	26	34.8	32	0.8	FAG16K505G++2GL5
160	10.0	32.0	33.0	18.0	27.5	\	7.0	320.0	6.8	26	45.0	32	0.8	FAG16K106G++2GL5
160	10.0	42.5	37.0	28.0	37.5	10.2	12.0	220.0	7.2	30	14.5	22	1.2	FAG16K106K++4KB5
160	20.0	42.5	37.0	28.0	37.5	10.2	12.0	440.0	6.9	30	15.1	22	1.2	FAG16K206K++4KB5
160	30.0	42.5	45.0	30.0	37.5	20.3	12.0	660.0	7.4	30	14.1	22	1.2	FAG16K306K++4KD5
160	40.0	57.5	45.0	30.0	52.5	20.3	12.0	640.0	7.6	35	13.7	16	1.2	FAG16K406M++4MD5
160	50.0	57.5	50.0	35.0	52.5	20.3	12.0	800.0	7.5	35	13.9	16	1.2	FAG16K506M++4MD5
250	1.0	32.0	20.0	11.0	27.5	\	8.0	40.0	14.0	24	16.7	40	0.8	FAG25K105G++2GL5
250	1.5	32.0	20.0	11.0	27.5	\	8.0	60.0	10.0	24	23.4	40	0.8	FAG25K155G++2GL5
250	2.0	32.0	22.0	13.0	27.5	\	9.0	80.0	8.2	24	22.6	40	0.8	FAG25K205G++2GL5
250	3.3	32.0	28.0	14.0	27.5	\	9.0	132.0	6.2	26	29.9	40	0.8	FAG25K335G++2GL5
250	4.0	32.0	33.0	18.0	27.5	\	9.0	160.0	5.9	26	31.4	40	0.8	FAG25K405G++2GL5
250	5.0	32.0	33.0	18.0	27.5	\	9.0	200.0	5.2	26	35.6	40	0.8	FAG25K505G++2GL5
250	6.8	42.5	37.0	22.0	37.5	10.2	14.0	272.0	4.9	28	15.6	40	1.2	FAG25K685K++4KB5
250	10.0	42.5	40.0	20.0	37.5	10.2	14.0	300.0	5.6	30	13.7	30	1.2	FAG25K106K++4KB5
250	15.0	42.5	37.0	28.0	37.5	10.2	14.0	450.0	5.2	30	14.7	30	1.2	FAG25K156K++4KB5
250	20.0	42.5	45.0	30.0	37.5	20.3	14.0	600.0	4.8	30	15.9	30	1.2	FAG25K206K++4KD5
250	25.0	57.5	45.0	30.0	52.5	20.3	14.0	625.0	5.7	35	13.4	25	1.2	FAG25K256M++4MD5
250	30.0	57.5	45.0	30.0	52.5	20.3	14.0	750.0	5.3	35	14.4	25	1.2	FAG25K306M++4MD5
250	35.0	57.5	50.0	35.0	52.5	20.3	14.0	875.0	5.5	35	13.9	25	1.2	FAG25K356M++4MD5
250	40.0	57.5	50.0	35.0	52.5	20.3	14.0	1000.0	5.2	35	14.7	25	1.2	FAG25K406M++4MD5
275	1.0	32.0	20.0	11.0	27.5	\	8.0	40.0	13.0	24	18	40	0.8	FAG27K105G++2GL5
275	3.3	32.0	33.0	18.0	27.5	\	9.0	132.0	6.2	26	29.9	40	0.8	FAG27K335G++2GL5
275	6.8	32.0	37.0	22.0	27.5	\	9.0	272.0	4.7	28	39.4	40	1.0	FAG27K685G++2GL5
275	10.0	42.5	40.0	20.0	37.5	10.2	14.0	300.0	5.9	30	13	30	1.2	FAG27K106K++4KB5
275	15.0	42.5	45.0	30.0	37.5	20.3	14.0	450.0	5.1	30	15	30	1.2	FAG27K156K++4KD5
275	20.0	57.5	45.0	30.0	52.5	20.3	14.0	500.0	6.0	35	12.8	25	1.2	FAG27K206M++4MD5
275	30.0	57.5	50.0	35.0	52.5	20.3	14.0	750.0	5.3	35	14.4	25	1.2	FAG27K306M++4MD5
350	0.68	32.0	20.0	11.0	27.5	\	8.0	30.6	15.0	24	15.6	45	0.8	FAG35K684G++2GL5
350	1.0	32.0	22.0	13.0	27.5	\	9.0	45.0	10.9	24	17	45	0.8	FAG35K105G++2GL5
350	2.0	32.0	33.0	18.0	27.5	\	9.0	90.0	7.3	26	25.4	45	0.8	FAG35K205G++2GL5
350	2.2	32.0	33.0	18.0	27.5	\	9.0	99.0	6.9	26	26.8	45	0.8	FAG35K225G++2GL5
350	3.3	32.0	37.0	22.0	27.5	\	9.0	148.5	5.7	28	32.5	45	1.0	FAG35K335G++2GL5
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	FAG35K475K++4KB5
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	FAG35K505K++4KB5
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	FAG35K685K++4KB5
350	10.0	42.5	45.0	30.0	37.5	20.3	14.0	340.0	5.3	30	14.4	34	1.2	FAG35K106K++4KD5
350	12.0	57.5	45.0	30.0	52.5	20.3	14.0	336.0	6.8	35	11.3	28	1.2	FAG35K126M++4MD5
350	20.0	57.5	50.0	35.0	52.5	20.3	14.0	560.0	5.9	35	13	28	1.2	FAG35K206M++4MD5

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

FAG series

Technical data

Vac	Cap	Dimensions			P	P1	Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	W	H	T			10KHz	Current	Typical		Res		Wire	
	μF	mm	mm	mm	mm	mm	70°C A	A	mΩ	nH	°C/W	V/us	mm	
400	0.47	32.0	20.0	11.0	27.5	\	7.0	23.5	18.6	24	16.5	50	0.8	FAG40K474G++2GL5
400	1.00	32.0	28.0	14.0	27.5	\	9.0	50.0	10.3	26	18.0	50	0.8	FAG40K105G++2GL5
400	1.50	32.0	33.0	18.0	27.5	\	9.0	75.0	8.1	26	22.9	50	0.8	FAG40K155G++2GL5
400	2.20	32.0	33.0	18.0	27.5	\	9.0	110.0	6.4	26	28.9	50	0.8	FAG40K225G++2GL5
400	3.00	32.0	37.0	22.0	27.5	\	9.0	150.0	5.7	28	32.5	50	1.0	FAG40K305G++2GL5
400	5.00	42.5	37.0	28.0	37.5	10.2	14.0	200.0	6.2	30	12.3	40	1.2	FAG40K505K++4KB5
400	10.00	57.5	45.0	30.0	52.5	20.3	14.0	350.0	6.9	35	11.1	35	1.2	FAG40K106M++4MD5
400	15.00	57.5	50.0	35.0	52.5	20.3	14.0	525.0	6.1	35	12.5	35	1.2	FAG40K156M++4MD5
450	0.22	32.0	20.0	11.0	27.5	\	5.0	12.1	30.9	24	19.4	55	0.8	FAG45K224G++2GL5
450	0.47	32.0	22.0	13.0	27.5	\	8.0	25.9	15.7	24	14.9	55	0.8	FAG45K474G++2GL5
450	1.00	32.0	33.0	18.0	27.5	\	8.0	55.0	9.2	26	25.5	55	0.8	FAG45K105G++2GL5
450	1.50	32.0	37.0	22.0	27.5	\	8.0	82.5	7.3	28	32.1	55	1.0	FAG45K155G++2GL5
450	3.30	42.5	37.0	28.0	37.5	10.2	14.0	148.5	7.4	30	10.3	45	1.2	FAG45K335K++4KB5
450	4.70	42.5	45.0	30.0	37.5	20.3	14.0	211.5	6.2	30	12.3	45	1.2	FAG45K475K++4KD5
450	6.80	57.5	45.0	30.0	52.5	20.3	14.0	258.4	7.5	35	10.2	38	1.2	FAG45K685M++4MD5
450	10.00	57.5	50.0	35.0	52.5	20.3	14.0	380.0	6.6	35	11.6	38	1.2	FAG45K106M++4MD5

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

FAB series

Overview

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

Applications

- Suitable for small power AC output filter.
- UPS systems, solar inverter, motor drivers.

Features

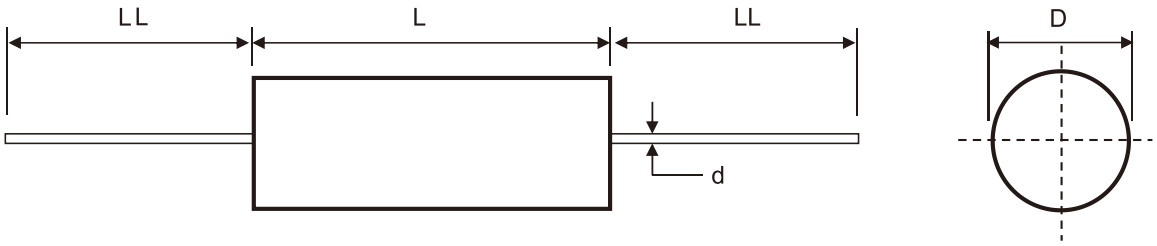
- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- Suitable for high frequency applications

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 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 (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.25 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤40 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FAB series

Outline Drawing



Dimensions - Lead wires

D	L	d	LL
(mm) max	(mm) max	(mm) ±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

FAB series

Technical data

Vac	Cap	Dimensions		Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead wire	Part Number
	Value	D	L	10KHz	Current	Typical		Res			
	μF	mm max	mm max	70°C A	A	mΩ	nH	°C/W	V/us	mm	
160	1.0	10.0	34.0	6.0	60.0	8.7	12	47.9	60	0.8	FAB16K105034XLLN
160	2.2	11.5	34.0	6.0	66.0	14.2	20	29.3	30	0.8	FAB16K225034XLLN
160	2.5	12.0	34.0	7.0	75.0	12.7	20	24.1	30	0.8	FAB16K255034XLLN
160	3.0	13.5	34.0	8.0	90.0	10.7	20	21.9	30	1.0	FAB16K305034XLLN
160	3.3	14.0	34.0	9.0	99.0	9.8	20	18.9	30	1.0	FAB16K335034XLLN
160	4.0	15.5	34.0	9.0	120.0	8.3	20	22.3	30	1.0	FAB16K405034XLLN
160	5.0	17.0	34.0	9.0	150.0	7.0	20	26.5	30	1.0	FAB16K505034XLLN
160	6.8	19.5	34.0	9.0	204.0	5.7	20	32.5	30	1.0	FAB16K685034XLLN
160	8.0	18.0	48.0	9.0	160.0	6.9	25	26.8	20	1.0	FAB16K805048XLLN
160	10.0	20.0	48.0	9.0	200.0	12.4	25	14.9	20	1.0	FAB16K106048XLLN
160	15.0	24.0	48.0	12.0	300.0	5.1	25	20.4	20	1.2	FAB16K156048XLLN
160	18.0	26.0	48.0	12.0	360.0	4.4	25	23.7	20	1.2	FAB16K186048XLLN
160	20.0	28.0	48.0	12.0	400.0	10.7	25	9.7	20	1.2	FAB16K206048XLLN
160	25.0	31.0	48.0	12.0	500.0	4.0	25	26.0	20	1.2	FAB16K256048XLLN
160	30.0	29.0	58.0	12.0	450.0	5.2	30	20.0	15	1.2	FAB16K306048XLLN
160	35.0	33.5	58.0	12.0	525.0	4.6	30	22.6	15	1.2	FAB16K356048XLLN
160	40.0	36.0	58.0	12.0	600.0	8.8	30	11.8	15	1.2	FAB16K406048XLLN
250	0.47	9.5	34.0	6.0	28.2	14.4	15	28.9	60	0.8	FAB25K474034XLLN
250	0.68	10.0	34.0	6.0	30.6	15.2	20	27.4	45	0.8	FAB25K684034XLLN
250	0.82	11.0	34.0	6.5	36.9	13.8	20	26.5	45	0.8	FAB25K824034XLLN
250	1.0	12.0	34.0	7.0	45.0	10.8	20	28.3	45	0.8	FAB25K105034XLLN
250	1.5	14.5	34.0	9.0	67.5	75.0	20	24.7	45	1.0	FAB25K155034XLLN
250	2.0	16.5	34.0	9.0	90.0	6.1	20	30.4	45	1.0	FAB25K205034XLLN
250	2.2	17.5	34.0	9.0	99.0	5.7	20	32.5	45	1.0	FAB25K225034XLLN
250	2.5	18.5	34.0	9.0	112.5	5.2	20	35.6	45	1.0	FAB25K255034XLLN
250	3.0	20.0	34.0	9.0	135.0	4.7	20	39.4	45	1.0	FAB25K305034XLLN
250	3.3	18.0	48.0	9.0	99.0	6.8	25	27.2	30	1.0	FAB25K335048XLLN
250	4.0	19.5	48.0	9.0	120.0	6.0	25	30.9	30	1.0	FAB25K405048XLLN
250	4.7	21.0	48.0	9.0	141.0	5.3	25	34.9	30	1.0	FAB25K475048XLLN
250	5.0	21.5	48.0	9.0	150.0	5.2	25	35.6	30	1.0	FAB25K505048XLLN
250	6.8	25.0	48.0	12.0	204.0	4.2	25	24.8	30	1.2	FAB25K685048XLLN
250	10.0	30.0	48.0	12.0	300.0	3.5	25	29.8	30	1.2	FAB25K106048XLLN
250	15.0	31.5	58.0	12.0	300.0	6.2	30	16.8	20	1.2	FAB25K156058XLLN
250	20.0	35.0	58.0	12.0	400.0	5.2	30	20	20	1.2	FAB25K206058XLLN
330	0.47	11.0	34.0	6.0	28.2	17.0	20	24.5	60	0.8	FAB33K474034XLLN
330	0.68	13.0	34.0	7.0	40.8	12.2	20	25.1	60	0.8	FAB33K684034XLLN
330	1.0	15.5	34.0	9.0	60.0	8.6	20	21.5	60	1.0	FAB33K105034XLLN
330	2.0	18.5	48.0	9.0	80.0	8.2	25	22.6	40	1.0	FAB33K205048XLLN
330	2.2	19.5	48.0	9.0	88.0	6.8	25	27.2	40	1.0	FAB33K225048XLLN
330	3.0	22.5	48.0	9.0	120.0	6.2	25	29.9	40	1.0	FAB33K305048XLLN
330	3.3	23.5	48.0	12.0	132.0	5.6	25	18.6	40	1.2	FAB33K335048XLLN
330	4.0	25.5	48.0	12.0	160.0	4.9	25	21.3	40	1.2	FAB33K405048XLLN
330	4.7	27.5	48.0	12.0	188.0	4.6	25	22.6	40	1.2	FAB33K475048XLLN
330	5.0	28.5	48.0	12.0	200.0	4.4	25	23.7	40	1.2	FAB33K505048XLLN
330	6.8	28.5	58.0	12.0	204.0	8.8	30	11.8	30	1.2	FAB33K685058XLLN
330	10.0	34.5	58.0	12.0	300.0	6.9	30	15.1	30	1.2	FAB33K106058XLLN

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

FAB series

Technical data

Vac	Cap	Dimensions		Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead wire	Part Number
	Value	D	L	10KHz	Current	Typical		Res			
	μF	mm max	mm max	70°C A	A	mΩ	nH	°C/W	V/us	mm	
400	0.47	14.5	34.0	8.0	37.6	12.4	20	18.9	80	1.0	FAB40K474034XLLN
400	0.68	17.0	34.0	9.0	54.4	9.1	20	20.4	80	1.0	FAB40K684034XLLN
400	1.00	20.5	34.0	9.0	80	6.8	20	27.2	80	1.0	FAB40K105034XLLN
400	1.50	20.5	48.0	9.0	90	8.3	25	22.3	60	1.0	FAB40K155048XLLN
400	2.00	23.5	48.0	12.0	120	6.5	25	16	60	1.2	FAB40K205048XLLN
400	2.20	24.5	48.0	12.0	132	6.1	25	17.1	60	1.2	FAB40K225048XLLN
400	3.00	28.5	48.0	12.0	180	5.1	25	20.4	60	1.2	FAB40K305048XLLN
400	3.30	30.0	48.0	12.0	198	4.8	25	21.7	60	1.2	FAB40K335048XLLN
400	4.00	33.0	48.0	12.0	240	4.6	25	22.6	60	1.2	FAB40K405048XLLN
400	4.70	29.5	58.0	12.0	188	10.3	30	10.1	40	1.2	FAB40K475058XLLN
400	5.00	30.5	58.0	12.0	200	9.8	30	10.6	40	1.2	FAB40K505058XLLN
400	6.80	35.0	58.0	12.0	272	7.9	30	13.2	40	1.2	FAB40K685058XLLN
450	0.15	10.0	34.0	5.0	31.5	18.9	20	31.7	210	0.8	FAB45K154034XLLN
450	0.22	12.0	34.0	7.0	46.2	13.4	20	22.8	210	0.8	FAB45K224034XLLN
450	0.33	14.5	34.0	9.0	69.3	9.2	20	20.1	210	1.0	FAB45K334034XLLN
450	0.47	17.0	34.0	9.0	98.7	7.0	20	26.5	210	1.0	FAB45K474034XLLN
450	0.68	20.5	34.0	9.0	142.8	5.5	20	33.7	210	1.0	FAB45K684034XLLN
450	1.00	20.5	48.0	9.0	140	6.1	25	30.4	140	1.0	FAB45K105048XLLN
450	1.50	24.5	48.0	12.0	210	4.6	25	22.6	140	1.2	FAB45K155048XLLN
450	2.00	28.5	48.0	12.0	280	4.0	25	26	140	1.2	FAB45K205048XLLN
450	2.20	29.5	48.0	12.0	308	3.9	25	26.7	140	1.2	FAB45K225048XLLN
450	2.50	31.5	48.0	12.0	350	3.8	25	27.4	140	1.2	FAB45K255048XLLN
450	3.00	28.0	58.0	12.0	270	4.7	30	22.2	90	1.2	FAB45K305058XLLN
450	3.30	29.5	58.0	12.0	297	4.6	30	22.6	90	1.2	FAB45K335058XLLN
450	4.00	32.5	58.0	12.0	360	4.2	30	24.8	90	1.2	FAB45K405058XLLN

* 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

- Suitable for small power AC output filter.
- UPS systems, solar inverter, motor drivers.

Features

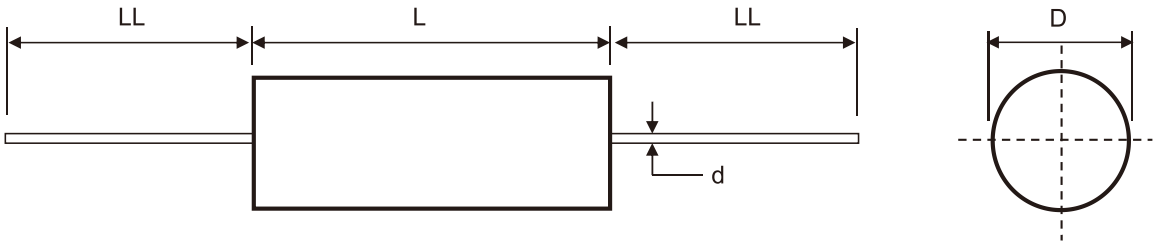
- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

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 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 (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.25 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤40 X 10^{-4} 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) ±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

FAH series

Technical data

Vac	Cap	Dimensions		Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	D	L	10KHz	Current	Typical		Res		wire	
	μF	mm max	mm max	70°C A	A	mΩ	nH	°C/W	V/us	mm	
160	1.0	10.0	34.0	6.0	60.0	8.7	12	47.9	60	0.8	FAH16K105034XLLN
160	2.2	11.5	34.0	6.0	66.0	14.2	20	29.3	30	0.8	FAH16K225034XLLN
160	2.5	12.0	34.0	7.0	75.0	12.7	20	24.1	30	0.8	FAH16K255034XLLN
160	3.0	13.5	34.0	8.0	90.0	10.7	20	21.9	30	1.0	FAH16K305034XLLN
160	3.3	14.0	34.0	9.0	99.0	9.8	20	18.9	30	1.0	FAH16K335034XLLN
160	4.0	15.5	34.0	9.0	120.0	8.3	20	22.3	30	1.0	FAH16K405034XLLN
160	5.0	17.0	34.0	9.0	150.0	7.0	20	26.5	30	1.0	FAH16K505034XLLN
160	6.8	19.5	34.0	9.0	204.0	5.7	20	32.5	30	1.0	FAH16K685034XLLN
160	8.0	18.0	48.0	9.0	160.0	6.9	25	26.8	20	1.0	FAH16K805048XLLN
160	10.0	20.0	48.0	9.0	200.0	12.4	25	14.9	20	1.0	FAH16K106048XLLN
160	15.0	24.0	48.0	12.0	300.0	5.1	25	20.4	20	1.2	FAH16K156048XLLN
160	18.0	26.0	48.0	12.0	360.0	4.4	25	23.7	20	1.2	FAH16K186048XLLN
160	20.0	28.0	48.0	12.0	400.0	10.7	25	9.7	20	1.2	FAH16K206048XLLN
160	25.0	31.0	48.0	12.0	500.0	4.0	25	26.0	20	1.2	FAH16K256048XLLN
160	30.0	29.0	58.0	12.0	450.0	5.2	30	20.0	15	1.2	FAH16K306048XLLN
160	35.0	33.5	58.0	12.0	525.0	4.6	30	22.6	15	1.2	FAH16K356048XLLN
160	40.0	36.0	58.0	12.0	600.0	8.8	30	11.8	15	1.2	FAH16K406048XLLN
250	0.47	9.5	34.0	6.0	28.2	14.4	15	28.9	60	0.8	FAH25K474034XLLN
250	0.68	10.0	34.0	6.0	30.6	15.2	20	27.4	45	0.8	FAH25K684034XLLN
250	0.82	11.0	34.0	6.5	36.9	13.8	20	26.5	45	0.8	FAH25K824034XLLN
250	1.0	12.0	34.0	7.0	45.0	10.8	20	28.3	45	0.8	FAH25K105034XLLN
250	1.5	14.5	34.0	9.0	67.5	75.0	20	24.7	45	1.0	FAH25K155034XLLN
250	2.0	16.5	34.0	9.0	90.0	6.1	20	30.4	45	1.0	FAH25K205034XLLN
250	2.2	17.5	34.0	9.0	99.0	5.7	20	32.5	45	1.0	FAH25K225034XLLN
250	2.5	18.5	34.0	9.0	112.5	5.2	20	35.6	45	1.0	FAH25K255034XLLN
250	3.0	20.0	34.0	9.0	135.0	4.7	20	39.4	45	1.0	FAH25K305034XLLN
250	3.3	18.0	48.0	9.0	99.0	6.8	25	27.2	30	1.0	FAH25K335048XLLN
250	4.0	19.5	48.0	9.0	120.0	6.0	25	30.9	30	1.0	FAH25K405048XLLN
250	4.7	21.0	48.0	9.0	141.0	5.3	25	34.9	30	1.0	FAH25K475048XLLN
250	5.0	21.5	48.0	9.0	150.0	5.2	25	35.6	30	1.0	FAH25K505048XLLN
250	6.8	25.0	48.0	12.0	204.0	4.2	25	24.8	30	1.2	FAH25K685048XLLN
250	10.0	30.0	48.0	12.0	300.0	3.5	25	29.8	30	1.2	FAH25K106048XLLN
250	15.0	31.5	58.0	12.0	300.0	6.2	30	16.8	20	1.2	FAH25K156058XLLN
250	20.0	35.0	58.0	12.0	400.0	5.2	30	20	20	1.2	FAH25K206058XLLN
330	0.47	11.0	34.0	6.0	28.2	17.0	20	24.5	60	0.8	FAH33K474034XLLN
330	0.68	13.0	34.0	7.0	40.8	12.2	20	25.1	60	0.8	FAH33K684034XLLN
330	1.0	15.5	34.0	9.0	60.0	8.6	20	21.5	60	1.0	FAH33K105034XLLN
330	2.0	18.5	48.0	9.0	80.0	8.2	25	22.6	40	1.0	FAH33K205048XLLN
330	2.2	19.5	48.0	9.0	88.0	6.8	25	27.2	40	1.0	FAH33K225048XLLN
330	3.0	22.5	48.0	9.0	120.0	6.2	25	29.9	40	1.0	FAH33K305048XLLN
330	3.3	23.5	48.0	12.0	132.0	5.6	25	18.6	40	1.2	FAH33K335048XLLN
330	4.0	25.5	48.0	12.0	160.0	4.9	25	21.3	40	1.2	FAH33K405048XLLN
330	4.7	27.5	48.0	12.0	188.0	4.6	25	22.6	40	1.2	FAH33K475048XLLN
330	5.0	28.5	48.0	12.0	200.0	4.4	25	23.7	40	1.2	FAH33K505048XLLN
330	6.8	28.5	58.0	12.0	204.0	8.8	30	11.8	30	1.2	FAH33K685058XLLN
330	10.0	34.5	58.0	12.0	300.0	6.9	30	15.1	30	1.2	FAH33K106058XLLN

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

FAH series

Technical data

Vac	Cap	Dimensions		Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part
	Value	D	L	10KHz	Current	Typical		Res		wire	Number
	μF	mm max	mm max	70°C A	A	mΩ	nH	°C/W	V/us	mm	
400	0.47	14.5	34.0	8.0	37.6	12.4	20	18.9	80	1.0	FAH40K474034XLLN
400	0.68	17.0	34.0	9.0	54.4	9.1	20	20.4	80	1.0	FAH40K684034XLLN
400	1.00	20.5	34.0	9.0	80	6.8	20	27.2	80	1.0	FAH40K105034XLLN
400	1.50	20.5	48.0	9.0	90	8.3	25	22.3	60	1.0	FAH40K155048XLLN
400	2.00	23.5	48.0	12.0	120	6.5	25	16	60	1.2	FAH40K205048XLLN
400	2.20	24.5	48.0	12.0	132	6.1	25	17.1	60	1.2	FAH40K225048XLLN
400	3.00	28.5	48.0	12.0	180	5.1	25	20.4	60	1.2	FAH40K305048XLLN
400	3.30	30.0	48.0	12.0	198	4.8	25	21.7	60	1.2	FAH40K335048XLLN
400	4.00	33.0	48.0	12.0	240	4.6	25	22.6	60	1.2	FAH40K405048XLLN
400	4.70	29.5	58.0	12.0	188	10.3	30	10.1	40	1.2	FAH40K475058XLLN
400	5.00	30.5	58.0	12.0	200	9.8	30	10.6	40	1.2	FAH40K505058XLLN
400	6.80	35.0	58.0	12.0	272	7.9	30	13.2	40	1.2	FAH40K685058XLLN
450	0.15	10.0	34.0	5.0	31.5	18.9	20	31.7	210	0.8	FAH45K154034XLLN
450	0.22	12.0	34.0	7.0	46.2	13.4	20	22.8	210	0.8	FAH45K224034XLLN
450	0.33	14.5	34.0	9.0	69.3	9.2	20	20.1	210	1.0	FAH45K334034XLLN
450	0.47	17.0	34.0	9.0	98.7	7.0	20	26.5	210	1.0	FAH45K474034XLLN
450	0.68	20.5	34.0	9.0	142.8	5.5	20	33.7	210	1.0	FAH45K684034XLLN
450	1.00	20.5	48.0	9.0	140	6.1	25	30.4	140	1.0	FAH45K105048XLLN
450	1.50	24.5	48.0	12.0	210	4.6	25	22.6	140	1.2	FAH45K155048XLLN
450	2.00	28.5	48.0	12.0	280	4.0	25	26	140	1.2	FAH45K205048XLLN
450	2.20	29.5	48.0	12.0	308	3.9	25	26.7	140	1.2	FAH45K225048XLLN
450	2.50	31.5	48.0	12.0	350	3.8	25	27.4	140	1.2	FAH45K255048XLLN
450	3.00	28.0	58.0	12.0	270	4.7	30	22.2	90	1.2	FAH45K305058XLLN
450	3.30	29.5	58.0	12.0	297	4.6	30	22.6	90	1.2	FAH45K335058XLLN
450	4.00	32.5	58.0	12.0	360	4.2	30	24.8	90	1.2	FAH45K405058XLLN

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

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.

Features

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

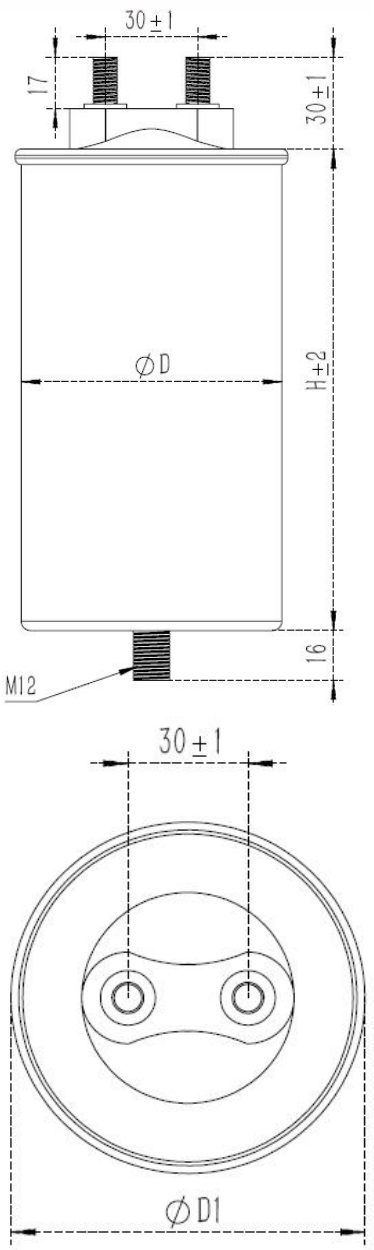
Specifications

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 △C/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 2002/95/EC
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 V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change :≤ ±3% DF change (△tgδ):≤20 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit

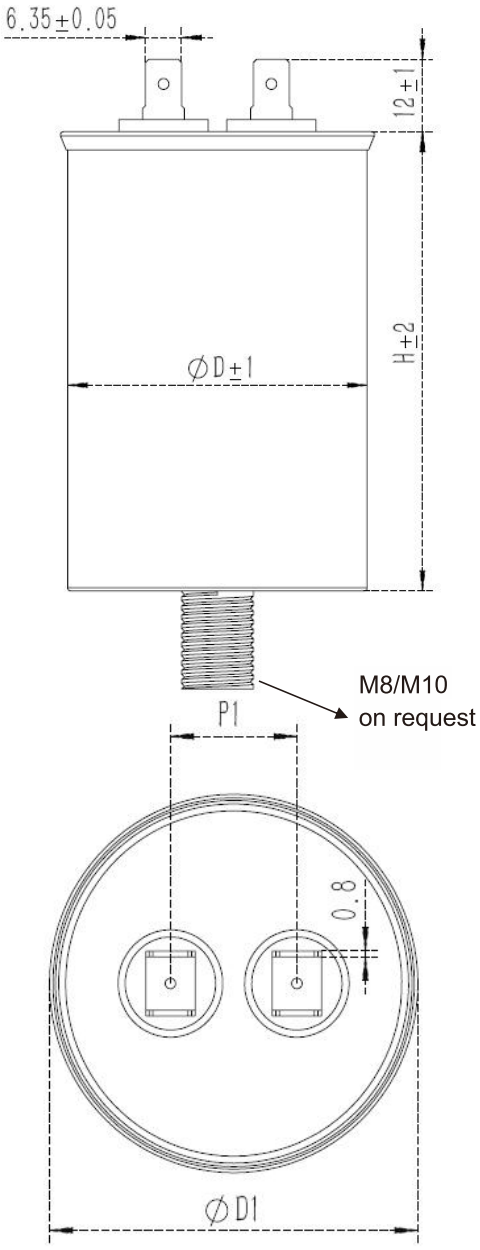
FAC series

Terminal Configuration

D≥76 Screw terminals



D≤63.5 Fast-on terminals



Notes:

Diameter D	≤ 76mm	86mm	96mm	116mm	136mm
Diameter After Sealed D1	D + 3mm	D + 4mm	D + 4mm	D + 5mm	D + 6mm

FAC series

Technical data

Cap Value	Vac	OD±1		H±2		Irms max at 50°C	Peak Current	ESR 1KHz	ESL	Thermal Res	dv/dt	Pkg Qty	Part Number
μF		mm	inch	mm	inch	A	A	mΩ	nH	°C/W	V/us	pcs	
100	480	76	(2.99)	200	(7.9)	50	1710	4.1	190	4.0	17.1	12	FAC48K1073++CHHD
150	480	76	(2.99)	200	(7.9)	40	2565	3.5	200	4.0	17.1	12	FAC48K1573++CHHD
200	480	76	(2.99)	250	(9.8)	40	2610	4.6	200	3.0	13.1	12	FAC48K2073++CHHD
250	480	86	(3.39)	250	(9.8)	50	2925	4.2	200	2.5	11.7	8	FAC48K2575++CHHD
20	550	50	(1.97)	100	(3.9)	16.0	600	6.9	175	7.9	30.0	15	FAC55K206U++QVEC
30	550	50	(1.97)	125	(4.9)	16	750	6.6	175	6.3	25.0	15	FAC55K306U++QVEC
40	550	60	(2.36)	125	(4.9)	16.0	750	7.1	175	5.5	18.8	15	FAC55K406W++QVEC
50	550	63.5	(2.50)	125	(5)	16.0	850	6.1	175	5.3	17.0	12	FAC55K5061++QVEC
70	550	76	(2.99)	150	(5.9)	25.0	900	4.6	175	4.2	12.9	12	FAC55K7063++CHHD
80	550	76	(2.99)	150	(5.9)	25.0	1800	4.3	190	4.3	22.5	12	FAC55K8063++CHHD
100	550	86	(3.39)	150	(5.9)	30.0	2821	3.9	200	4.0	28.2	8	FAC55K1075++CHHD
125	550	86	(3.39)	200	(7.9)	30	2821	3.6	200	2.9	22.6	8	FAC55K1275++CHHD
150	550	86	(3.39)	200	(7.9)	40	3217	5.0	200	2.9	21.4	8	FAC55K1575++CHHD
200	550	86	(3.39)	250	(9.8)	50	3217	4.4	200	2.5	16.1	8	FAC55K2075++CHHD
250	550	96	(3.78)	250	(9.8)	50	3500	4.0	240	2.1	14.0	6	FAC55K2576++CHHD
300	550	106	(4.17)	250	(9.8)	50	3500	3.7	240	2.0	11.7	5	FAC55K3077++CHHD
10	600	50	(1.97)	75	(3.0)	16	350	6.4	160	10.5	35.0	15	FAC60K106U++QVEC
20	600	50	(1.97)	125	(4.9)	16	500	11.1	160	6.3	25.0	15	FAC60K206U++QVEC
25	600	50	(1.97)	125	(4.9)	16	600	6.1	175	6.3	24.0	15	FAC60K256U++QVEC
30	600	60	(2.36)	125	(4.9)	16	600	5.4	175	5.3	20.0	12	FAC60K306W++QVEC
35	600	60	(2.36)	125	(5)	16.0	700	7.3	175	5.3	20.0	12	FAC60K356W++QVEC
40	600	63.5	(2.50)	125	(5)	16	700	6.6	175	5.3	17.5	12	FAC60K4061++QVEC
45	600	65	(2.56)	125	(4.9)	16.0	700	6.1	175	5.3	15.6	12	FAC60K4562++QVEC
50	600	76	(2.99)	150	(5.9)	20	850.0	5.7	175	4.3	17.0	12	FAC60K5063++CHHD
10	660	50	(1.97)	125	(4.9)	16	550	5.2	160	10.5	55.0	15	FAC66K106U++QVEC
15	660	60	(2.36)	125	(4.9)	16.0	420	6.2	160	6.3	28.0	12	FAC66K156W++QVEC
20	660	55	(2.17)	125	(4.9)	16	550	8.3	175	6.3	27.5	12	FAC66K206V++QVEC
25	660	60	(2.36)	125	(4.9)	16.0	550	7.9	175	5.3	22.0	12	FAC66K256W++QVEC
30	660	63.5	(2.50)	125	(4.9)	16.0	750	6.3	175	5.5	25.0	12	FAC66K3061++QVEC
40	660	76	(2.99)	150	(5.9)	30	900	5.2	175	4.6	22.5	12	FAC66K4063++CHHD
50	660	86	(3.39)	150	(5.9)	40.0	1000	4.7	175	4.0	20.0	8	FAC66K5065++CHHD
10	690	50	(1.97)	125	(4.9)	16.0	550	5.2	160	6.3	55.0	15	FAC69K106U++PUND
15	690	50	(1.97)	125	(4.9)	16.0	420	6.2	160	6.3	28.0	15	FAC69K156U++QVEC
20	690	55	(2.17)	125	(4.9)	16	550	8.3	175	6.0	27.5	15	FAC69K206V++QVEC
30	690	63.5	(2.50)	125	(4.9)	16.0	750	6.3	175	5.5	25.0	12	FAC69K3061++QVEC
40	690	76	(2.99)	150	(5.9)	25.0	1150	4.8	190	4.3	28.8	12	FAC69K4063++CHHD
50	690	86	(3.39)	150	(5.9)	30	1150	4.3	190	4.0	23.0	8	FAC69K5065++CHHD
70	690	76	(2.99)	250	(9.8)	30.0	1260	3.7	200	2.9	18.0	12	FAC69K7063++CHHD
85	690	86	(3.39)	250	(9.8)	40.0	1530	3.5	220	2.5	18.0	8	FAC69K8565++CHHD
100	690	86	(3.39)	250	(9.8)	40	1800	3.3	200	2.5	18.0	8	FAC69K1075++CHHD
125	690	106	(4.17)	250	(9.8)	50	1563	4.0	220	2.0	12.5	6	FAC69K1277++CHHD
150	690	106	(4.17)	250	(9.8)	50	1875	3.8	240	2.0	12.5	6	FAC69K1577++CHHD
170	690	106	(4.17)	250	(9.8)	50	2125	3.6	240	2.0	12.5	6	FAC69K1777++CHHD

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

FAC series

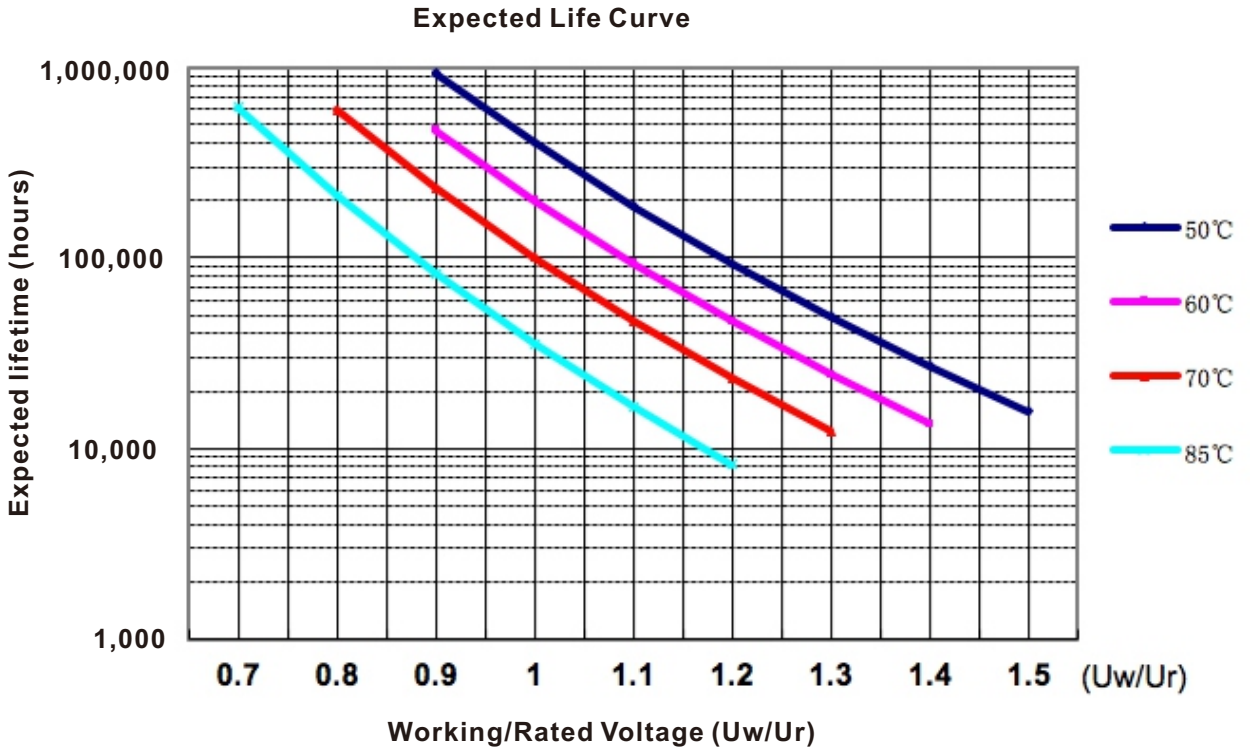
Technical data

Cap Value	Vac	OD±1		H±2		Irms max at 50°C	Peak Current	ESR 1KHz	ESL	Thermal Res	dv/dt	Pkg Qty	Part Number
μF		mm	inch	mm	inch	A	A	mΩ	nH	°C/W	V/us	pcs	
60	250	50	(1.97)	100	(3.9)	16	999	3.9	175	7.8	16.7	15	FAC25K606U++QVEC
80	250	50	(1.97)	100	(3.9)	16	1332	4.4	175	7.8	16.7	15	FAC25K806U++QVEC
100	250	50	(1.97)	125	(4.9)	16	1260	4.8	175	6.3	12.6	15	FAC25K107U++QVEC
120	250	55	(2.17)	125	(4.9)	16	1512	4.6	175	6.0	12.6	15	FAC25K127V++QVEC
150	250	60	(2.36)	125	(4.9)	16	1890	4.3	175	5.3	12.6	12	FAC25K157W++QVEC
150	250	76	(2.99)	125	(4.9)	22	1620	3.3	190	4.7	10.8	12	FAC25K1573++CHHD
200	250	76	(2.99)	125	(4.9)	30	2340	3.0	200	4.7	11.7	12	FAC25K2073++CHHD
250	250	76	(2.99)	150	(5.9)	30	2160	3.4	190	4.3	8.6	12	FAC25K2573++CHHD
300	250	86	(3.39)	150	(5.9)	36	2592	3.2	190	4.3	8.6	8	FAC25K3075++CHHD
350	250	76	(2.99)	200	(7.9)	35	3623	3.1	200	4.0	10.4	12	FAC25K3073++CHHD
400	250	86	(3.39)	200	(7.9)	40	4140	3.0	200	4.0	10.4	8	FAC25K4075++CHHD
500	250	86	(3.39)	200	(7.9)	50	5400	3.3	220	2.9	10.8	8	FAC25K5075++CHHD
600	250	86	(3.39)	250	(10)	50	4806	3.1	200	2.5	8.0	8	FAC25K6075++CHHD
50	330	50	(1.97)	100	(3.9)	16	833	5.1	175	7.8	16.7	15	FAC33K506U++QVEC
60	330	50	(1.97)	125	(4.9)	16	756	5.4	175	6.3	12.6	15	FAC33K606U++QVEC
100	330	60	(2.36)	125	(4.9)	16	1260	4.1	175	5.3	12.6	12	FAC33K107W++PVND
100	330	76	(2.99)	125	(4.9)	30	1305	3.8	190	5.2	13.1	12	FAC33K1073++CHHD
120	330	63.5	(2.50)	125	(4.9)	16	864	3.8	175	5.5	7.2	12	FAC33K1271++QVEC
150	330	76	(2.99)	150	(5.9)	40	1350	3.0	190	4.3	9.0	12	FAC33K1573++CHHD
200	330	86	(3.39)	150	(5.9)	40	2610	3.1	200	4.0	13.1	8	FAC33K2075++CHHD
250	330	76	(2.99)	200	(7.9)	40	2138	3.9	190	4.0	8.6	12	FAC33K2573++CHHD
300	330	86	(3.39)	200	(7.9)	50	3915	3.6	200	2.9	13.1	8	FAC33K3075++CHHD
350	330	86	(3.39)	200	(7.9)	50	4568	3.4	200	2.9	13.1	8	FAC33K3575++CHHD
400	330	86	(3.39)	250	(9.8)	50	3240	3.6	200	2.5	8.1	8	FAC33K4075++CHHD
20	450	50	(1.97)	75	(3.0)	16	700	5.2	175	10.5	35.0	15	FAC45K206U++QVEC
30	450	50	(1.97)	100	(3.9)	16	700	6.9	175	7.8	23.3	15	FAC45K306U++QVEC
40	450	50	(1.97)	100	(3.9)	16	540	5.7	175	7.8	13.5	15	FAC45K406U++QVEC
50	450	50	(1.97)	125	(4.9)	16	540	5.0	175	5.3	10.8	15	FAC45K506U++QVEC
50	450	76	(2.99)	100	(3.9)	20	855	3.3	190	5.3	17.1	12	FAC45K5063++CHHD
70	450	60	(2.36)	125	(4.9)	16	907	4.8	175	5.5	13.0	12	FAC45K706W++QVEC
80	450	60	(2.36)	125	(4.9)	16	907	4.4	175	5.5	11.3	12	FAC45K806W++QVEC
100	450	76	(2.99)	150	(5.9)	35	1080	4.7	190	4.3	10.8	12	FAC45K1073++CHHD
150	450	86	(3.39)	150	(5.9)	40	1958	3.9	200	4.3	13.1	8	FAC45K1575++CHHD
200	450	86	(3.39)	200	(7.9)	40	2700	3.7	220	2.9	13.5	8	FAC45K2075++CHHD
250	450	86	(3.39)	200	(8)	50	2025	3.8	200	2.9	8.1	8	FAC45K2575++CHHD
300	450	86	(3.39)	250	(10)	50	2403	4.1	220	2.5	8.0	8	FAC45K3075++CHHD
20	480	50	(1.97)	75	(3.0)	16	750	4.8	175	10.5	37.5	15	FAC48K206U++QVEC
25	480	50	(1.97)	100	(3.9)	16	750	4.2	175	7.8	30.0	15	FAC48K256U++QVEC
30	480	50	(1.97)	100	(3.9)	16	750	3.9	175	7.8	25.0	15	FAC48K306U++QVEC
40	480	60	(2.36)	100	(3.9)	12	850	5.2	175	7.3	21.3	12	FAC48K406W++QVEC
50	480	55	(2.17)	125	(4.9)	14	850	4.6	175	6.0	17.0	15	FAC48K506V++QVEC
60	480	76	(2.99)	125	(4.9)	18	1053	3.7	190	4.7	17.6	12	FAC48K6063++CHHD
70	480	76	(2.99)	125	(4.9)	20	1050	3.4	190	4.7	15.0	12	FAC48K7063++CHHD
80	480	76	(2.99)	150	(5.9)	30	1224	4.2	190	4.3	15.3	12	FAC48K8063++CHHD

* 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.

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.

Features

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

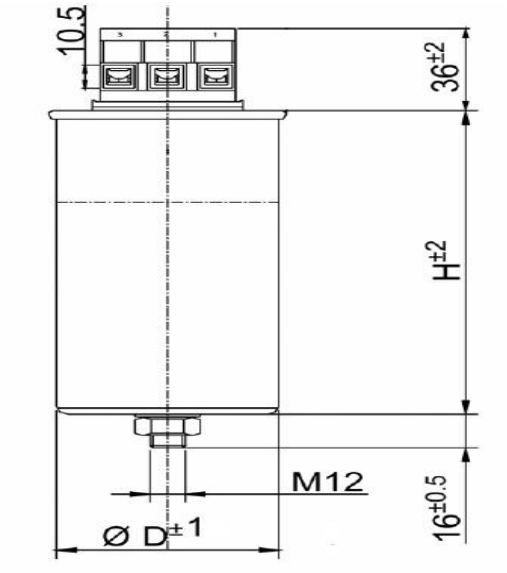
Specifications

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 △C/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 2002/95/EC
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 V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±3% DF change (△tgδ):≤20 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit

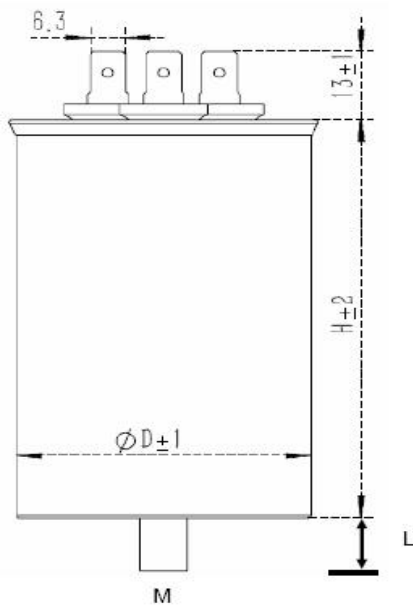
FAD series

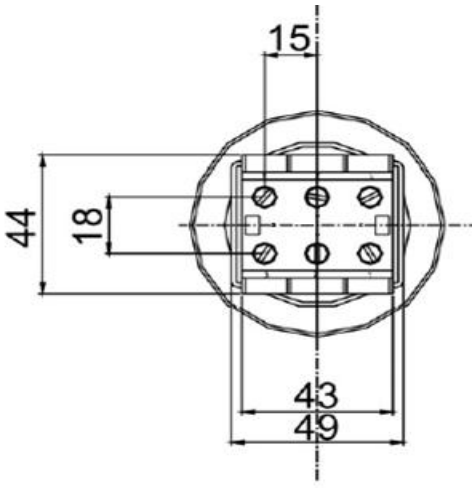
Terminal Configuration

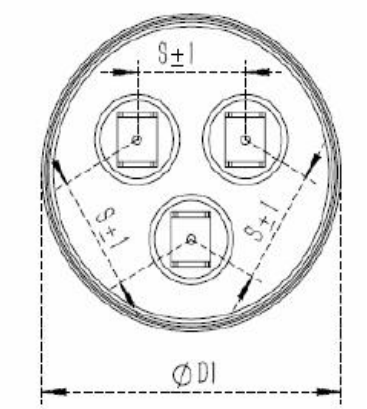
Screw terminals



Fast-on terminals







FAD series

Technical data

Cap Value	Vac	OD±1		H±2		Output Kvar @50Hz	I rms at 40°C	Surge Current	dv/dt	Pkg Qty	Part Number
μF		mm	inch	mm	inch		A	A	V/us	pcs	
3 x 200.6	230	86	(3.39)	275	(10.83)	10.0	25.1	5021	25	8	FAD23K2075++DEPD
3 x 200.6	230	116	(4.57)	160	(6.30)	10.0	25.1	5021	25	5	FAD23K2079++DEPD
3 x 250.7	230	86	(3.39)	275	(10.83)	12.5	31.4	6276	25	8	FAD23K2575++DEPD
3 x 250.7	230	116	(4.57)	200	(7.87)	12.5	31.4	6276	25	5	FAD23K2579++DEPD
3 x 300.9	230	86	(3.39)	350	(13.78)	15.0	37.7	7531	25	8	FAD23K3075++DEPD
3 x 300.9	230	116	(4.57)	200	(7.87)	15.0	37.7	7531	25	5	FAD23K3079++DEPD
3 x 335.0	230	116	(4.57)	230	(9.06)	16.7	41.9	8384	25	5	FAD23K3379++DEPD
3 x 66.3	400	86	(3.39)	200	(7.87)	10.0	14.4	2887	44	8	FAD40K6665++DEPD
3 x 82.9	400	86	(3.39)	200	(7.87)	12.5	18.0	3609	44	8	FAD40K8365++DEPD
3 x99.5	400	86	(3.39)	275	(10.83)	15.0	21.7	4330	44	8	FAD40K1075++DEPD
3 x 110.7	400	86	(3.39)	275	(10.83)	16.7	24.1	4821	44	8	FAD40K1175++DEPD
3 x 110.7	400	116	(4.57)	160	(6.30)	16.7	24.1	4821	44	5	FAD40K1179++DEPD
3 x 132.6	400	86	(3.39)	275	(10.83)	20.0	28.9	5774	44	8	FAD40K1375++DEPD
3 x 132.6	400	116	(4.57)	200	(7.87)	20.0	28.9	5774	44	5	FAD40K1379++DEPD
3 x 165.8	400	86	(3.39)	350	(13.78)	25.0	36.1	7217	44	8	FAD40K1675++DEPD
3 x 165.8	400	116	(4.57)	200	(7.87)	25.0	36.1	7217	44	5	FAD40K1679++DEPD
3 x 198.9	400	136	(5.35)	200	(7.87)	30.0	43.3	8661	44	2	FAD40K2070++DEPD
3 x 46	440	86	(3.39)	160	(6.30)	8.3	10.9	2178	48	8	FAD44K4665++DEPD
3 x 68.5	440	86	(3.39)	200	(7.87)	12.5	16.4	3280	48	8	FAD44K6965++DEPD
3 x 82.2	440	86	(3.39)	200	(7.87)	15.0	19.7	3937	48	8	FAD44K8365++DEPD
3 x 109.0	440	86	(3.39)	275	(10.83)	20.0	26.2	5249	48	8	FAD44K1175++DEPD
3 x 109.0	440	116	(4.57)	160	(6.30)	20.0	26.2	5249	48	5	FAD44K1179++DEPD
3 x 123.3	440	86	(3.39)	275	(10.83)	22.5	29.5	5905	48	8	FAD44K1275++DEPD
3 x 123.3	440	116	(4.57)	200	(7.87)	22.5	29.5	5905	48	5	FAD44K1279++DEPD
3 x 137.0	440	116	(4.57)	200	(7.87)	25.0	32.8	6561	48	5	FAD44K1479++DEPD
3 x 156	440	116	(4.57)	200	(7.87)	28.1	36.9	7375	48	5	FAD44K1579++DEPD
3 x 164.4	440	86	(3.39)	350	(13.78)	30.0	39.4	7873	48	8	FAD44K1675++DEPD
3 x 164.4	440	116	(4.57)	200	(7.87)	30.0	39.4	7873	48	5	FAD44K1679++DEPD
3 x 40	480	86	(3.39)	200	(7.87)	8.7	10.5	2093	52	8	FAD48K4065++DEPD
3 x 60	480	86	(3.39)	275	(10.83)	13.0	15.6	3127	52	8	FAD48K6065++DEPD
3 x 80	480	116	(4.57)	200	(7.87)	17.4	20.9	4186	52	5	FAD48K8069++DEPD
3 x 120	480	116	(4.57)	275	(10.83)	26.0	31.3	6255	52	5	FAD48K1279++DEPD
3 x 38.5	525	86	(3.39)	200	(7.87)	10	11.0	2199	57	8	FAD52K3965++DEPD
3 x 48.1	525	86	(3.39)	200	(7.87)	12.5	13.7	2749	57	8	FAD52K4865++DEPD
3 x 58	525	86	(3.39)	230	(9.06)	15.0	16.5	3299	57	8	FAD52K5865++DEPD
3 x 77.0	525	86	(3.39)	275	(10.83)	20.0	22.0	4399	57	8	FAD52K7765++DEPD
3*96	525	86	(3.39)	350	(13.78)	25.0	27.5	5499	57	8	FAD52K9665++DEPD
3*96	525	116	(4.57)	200	(7.87)	25.0	27.5	5499	57	5	FAD52K9669++DEPD
3*115.4	525	136	(5.35)	200	(7.87)	30.0	33.0	6598	57	2	FAD52K1170++DEPD

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

FAD series

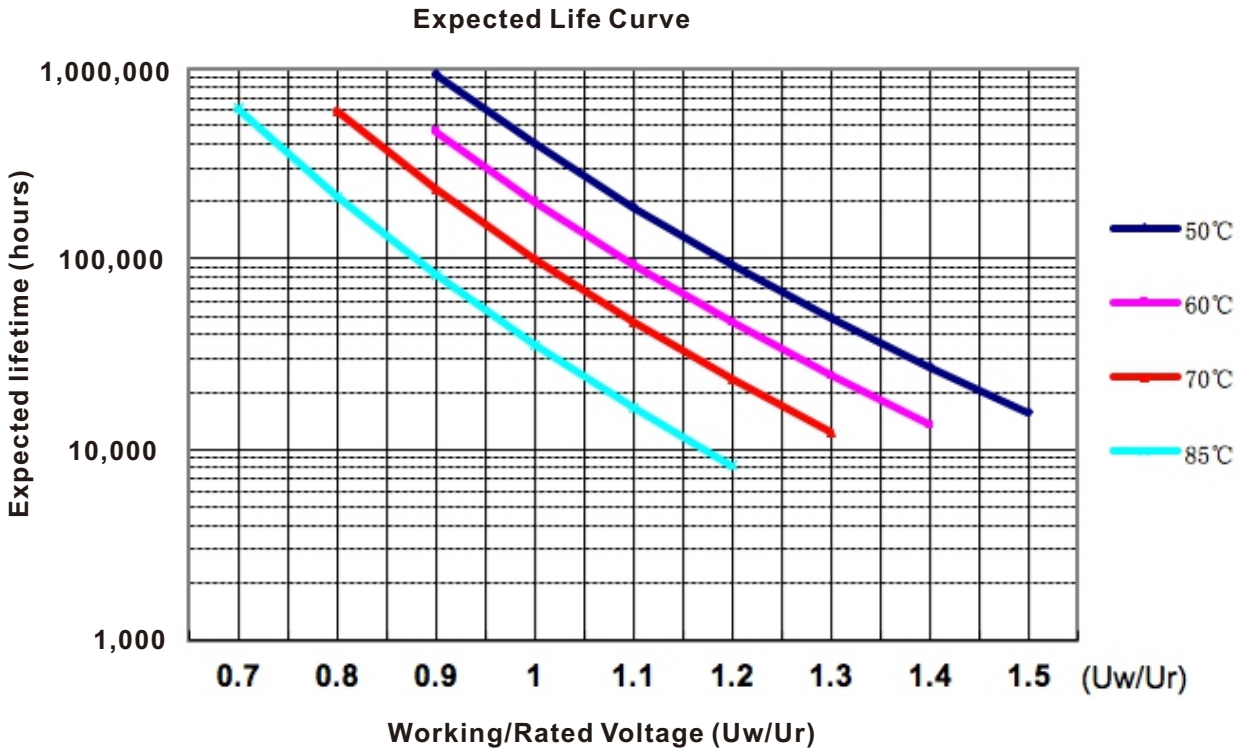
Technical data

Cap Value μF	Vac	OD±1 mm	OD±1 inch	H±2 mm	H±2 inch	Output Kvar @50Hz	I rms at 40°C A	Surge Current A	dv/dt V/us	Pkg Qty pcs	Part Number
3 x 20.3	660	86	(3.39)	200	(7.87)	8.33	7.3	1457	72	8	FAD66K2065++DEPD
3 x 24.4	660	86	(3.39)	200	(7.87)	10.0	8.7	1750	72	8	FAD66K2565++DEPD
3 x 30.4	660	86	(3.39)	230	(9.06)	12.5	10.9	2187	72	8	FAD66K3065++DEPD
3 x 36.5	660	96	(3.78)	230	(9.06)	15.0	13.1	2624	72	6	FAD66K3666++DEPD
3 x 48.7	660	86	(3.39)	350	(13.78)	20.0	17.5	3499	72	8	FAD66K4965++DEPD
3 x 27.9	690	86	(3.39)	230	(9.06)	12.5	10.5	2092	75	8	FAD69K2865++DEPD
3 x 33.4	690	96	(3.78)	230	(9.06)	15.0	12.6	2510	75	6	FAD69K3366++DEPD
3 x 44.6	690	86	(3.39)	350	(13.78)	20.0	16.7	3347	75	8	FAD69K4565++DEPD
3 x 55.7	690	86	(3.39)	350	(13.78)	25.0	20.9	4184	75	8	FAD69K5665++DEPD

* 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.

FAE 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

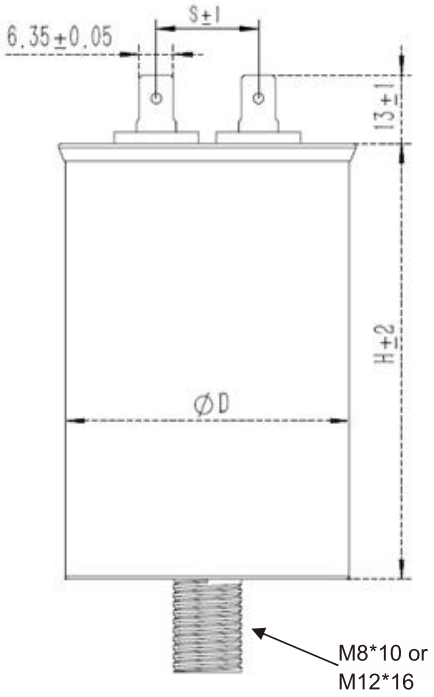
Specifications

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 Vn for 10s (terminal to terminal)
Test Voltage Between Terminals to Case	2.0KVac 50 Hz for 10s at +25°C
Insulation Resistance（IR*Cn）	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	1.1Un 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
Installation torque max	The bottom stud of case M12: 15Nm The bottom stud of case M8: 10Nm
RoHS Compliant	Compliant with requirements of directive 2002/95/EC
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_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±3% DF change (△tgδ):≤20 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit

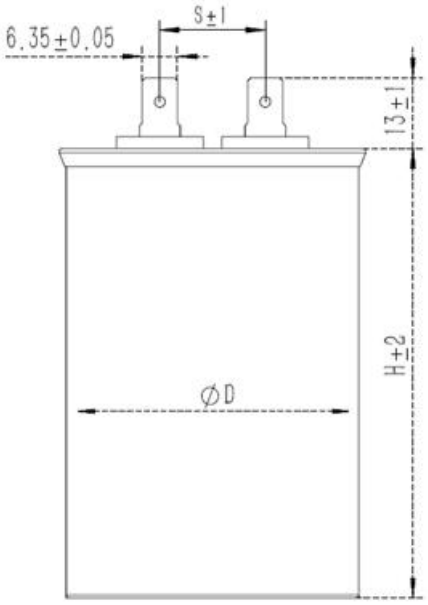
FAE series

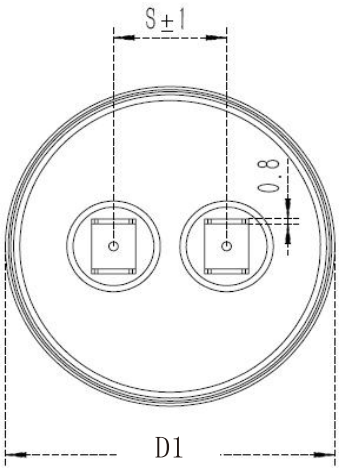
Terminal Configuration

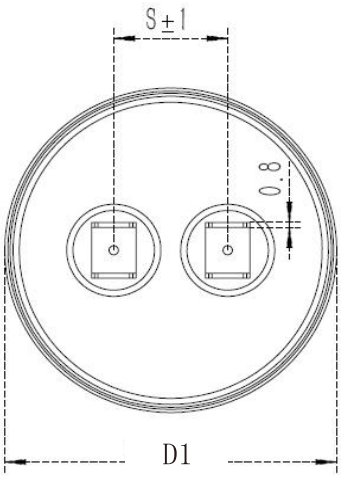
Fast-on ternimals with bottom stud



Fast-on ternimals without stud







Notes:

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

FAE series

Technical data

Cap Value μF	Vac	D ±1 mm	D1 ±1 mm	H ±2 mm	S ±1 mm	Part Number
2.0	450	40.0	43.0	55.0	16.0	FAE45K205T++QTPC
3.0	450	40.0	43.0	55.0	16.0	FAE45K305T++QTPC
4.0	450	40.0	43.0	55.0	16.0	FAE45K405T++QTPC
5.0	450	40.0	43.0	55.0	16.0	FAE45K505T++QTPC
7.5	450	40.0	43.0	65.0	16.0	FAE45K755T++QTPC
10.0	450	40.0	43.0	65.0	16.0	FAE45K106T++QTPC
12.5	450	40.0	43.0	75.0	16.0	FAE45K136T++QTPC
15.0	450	40.0	43.0	75.0	16.0	FAE45K156T++QTPC
17.5	450	40.0	43.0	75.0	16.0	FAE45K186T++QTPC
20.0	450	50.0	53.0	65.0	20.0	FAE45K206U++QUPC
25.0	450	50.0	53.0	75.0	20.0	FAE45K256U++QUPC
30.0	450	50.0	53.0	85.0	20.0	FAE45K306U++QUPC
35.0	450	50.0	53.0	85.0	20.0	FAE45K356U++QUPC
40.0	450	50.0	53.0	100.0	20.0	FAE45K406U++QUPC
45.0	450	50.0	53.0	110.0	20.0	FAE45K456U++QUPC
50.0	450	50.0	53.0	110.0	20.0	FAE45K506U++QUPC
55.0	450	50.0	53.0	125.0	20.0	FAE45K556U++QUPC
60.0	450	50.0	53.0	125.0	20.0	FAE45K606U++QUPC
65.0	450	55.0	58.0	110.0	20.0	FAE45K656V++QVPC
70.0	450	55.0	58.0	125.0	20.0	FAE45K706V++QVPC
80.0	450	60.0	63.0	125.0	20.0	FAE45K806W++QVPC
100.0	450	63.5	66.5	125.0	20.0	FAE45K1071++QVPC

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

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

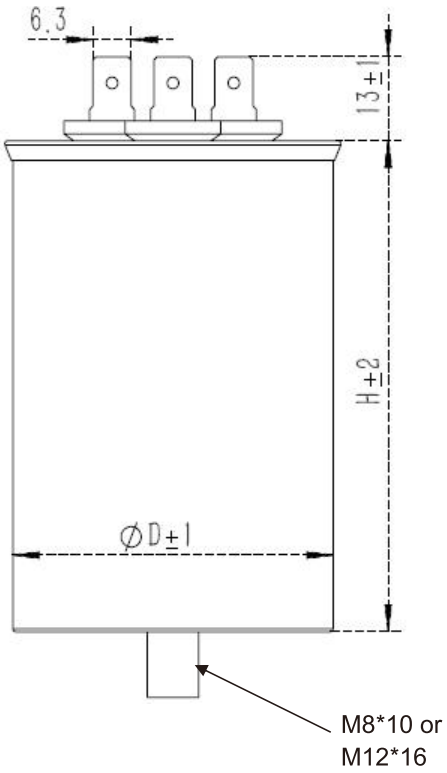
Specifications

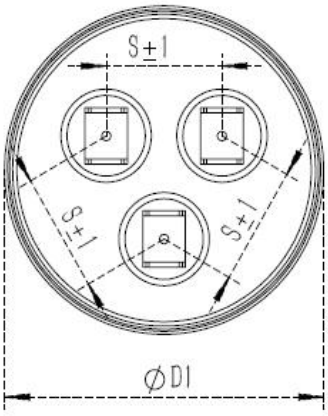
Items	Characteristics
Reference Standard	IEC 60252 UL 810
Climatic Category	40/85/21 – IEC 60068-1
Operating Temperature	-40°C ~ +85°C
Rated AC Voltage	450Vac 50/60Hz
Capacitance Range	15+1.5μF ~ 80+15μF
Capacitance Tolerance	±5%(J) or ±10%(K)
Dissipation Factor (DF)	≤ 0.001 (0.1%) at 100Hz at +25°C
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 2002/95/EC
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_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±3% DF change (△tgδ):≤20 X 10^{-4} at 100Hz
	Insulation resistance: ≥50% of initial limit

FAF series

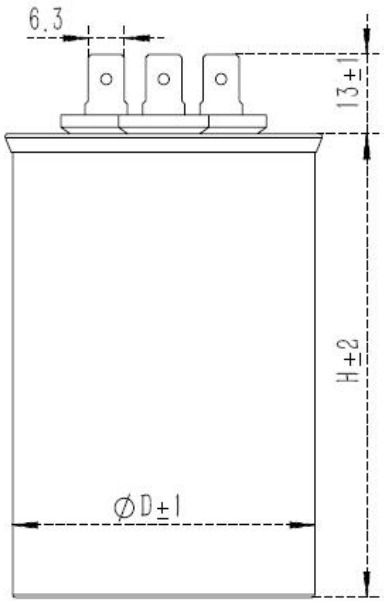
Terminal Configuration

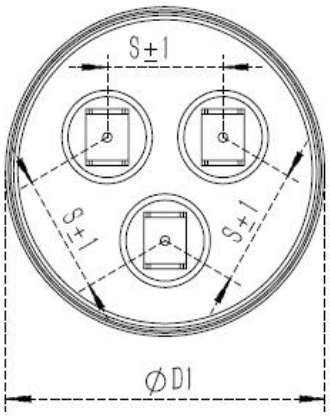
Fast-on ternimals with stud





Fast-on ternimals without stud





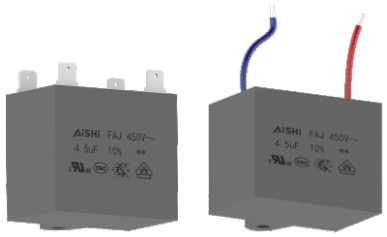
FAF series

Technical data

Cap Value μF	Vac	D ±1 mm	D1 ±1 mm	H ±2 mm	S ±1 mm	Part Number
15+1.5	450	50.0	53.0	75.0	20.0	FAF45K151U++QVMC
20+1.5	450	50.0	53.0	85.0	20.0	FAF45K201U++QVMC
25+3	450	50.0	53.0	85.0	20.0	FAF45K253U++QVMC
30+5	450	50.0	53.0	95.0	20.0	FAF45K305U++QVMC
35+5	450	50.0	53.0	105.0	20.0	FAF45K355U++QVMC
40+5	450	50.0	53.0	120.0	20.0	FAF45K405U++QVMC
45+5	450	50.0	53.0	120.0	20.0	FAF45K455U++QVMC
45+7.5	450	50.0	53.0	125.0	20.0	FAF45K458U++QVMC
50+5	450	50.0	53.0	125.0	20.0	FAF45K505U++QVMC
50+7.5	450	50.0	53.0	125.0	20.0	FAF45K508U++QVMC
55+7.5	450	55.0	58.0	125.0	20.0	FAF45K558V++QVMC
60+7.5	450	55.0	58.0	125.0	20.0	FAF45K608V++QVMC
65+7.5	450	60.0	63.0	120.0	20.0	FAF45K658W++QVMC
70+7.5	450	60.0	63.0	125.0	20.0	FAF45K708W++QVMC
80+10	450	60.0	63.0	135.0	20.0	FAF45K80AW++QVMC

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

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

- Widely used in 50/60Hz single phase AC motor for starting or running.

Features

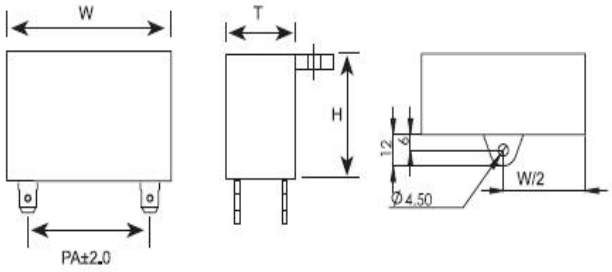
- High performance and high reliability
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- Safety class S0

Specifications

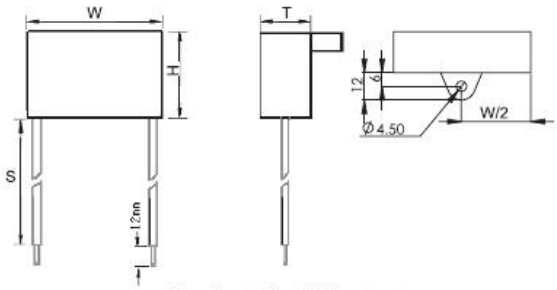
Items	Characteristics
Reference Standard	EN 60252-1, UL810, GB/3667.1
Climatic Category	40/85/56 IEC 60068-1
Passive Flammability Class	B
Passive Safety Class	S0
Operating Temperature Range	-40°C to +85°C
Capacitance Range	0.5μF to 10μF
Rated Voltage	450Vac / 500Vac 50/60Hz
Capacitance Tolerance	±5% 、±10% or ±20% at +25°C
Dissipation Factor (DF)	≤ 0.002 (0.2%) at 1kHz at +25°C
Test Voltage Between Terminals	2.0U_R 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 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
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.35 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤40 X 10^{-4} at 1KHz Insulation resistance: ≥50% of initial limit

FAJ series

Dimensions



Tabs



Insulated flexible lead wires

Dimensions - Case

Unit: mm

Case Code	W	H	T	PA	AWG
	±1.0	±1.0	±1.0	±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

FAJ series

Technical data

Vac	Cap	Dimensions			PA	Peak	dv/dt	Tabs	Part
	Value	W	H	T		Current		AMP	Number
	μF	mm	mm	mm	mm	A	V/us	#	
450	0.5	32.0	20.0	11.0	20.0	50.0	100	187	FAJ45K504Q++YVPN
450	1.0	32.0	22.0	13.0	20.0	100.0	100	187	FAJ45K105Q++YVPN
450	1.2	32.0	28.0	14.0	20.0	120.0	100	187	FAJ45K125Q++YVPN
450	1.4	32.0	28.0	14.0	20.0	140.0	100	187	FAJ45K145Q++YVPN
450	1.5	32.0	28.0	14.0	20.0	150.0	100	187	FAJ45K155Q++YVPN
450	1.6	32.0	28.0	14.0	20.0	160.0	100	187	FAJ45K165Q++YVPN
450	1.8	32.0	30.0	16.0	20.0	180.0	100	187	FAJ45K185Q++YVPN
450	2.0	32.0	33.0	18.0	20.0	200.0	100	187	FAJ45K205Q++YVPN
450	2.2	32.0	33.0	18.0	20.0	220.0	100	187	FAJ45K225Q++YVPN
450	2.5	32.0	33.0	18.0	20.0	250.0	100	187	FAJ45K255Q++YVPN
450	2.8	32.0	33.0	18.0	20.0	280.0	100	187	FAJ45K285Q++YVPN
450	3.0	32.0	37.0	22.0	20.0	300.0	100	187	FAJ45K305Q++YVPN
450	3.5	32.0	37.0	22.0	20.0	350.0	100	187	FAJ45K355Q++YVPN
450	4.0	32.0	37.0	22.0	20.0	400.0	100	187	FAJ45K405Q++YVPN
450	1.0	38.0	22.0	13.0	25.0	80.0	80	187	FAJ45K105R++YWPN
450	1.2	38.0	22.0	13.0	25.0	96.0	80	187	FAJ45K125R++YWPN
450	1.4	38.0	28.0	14.0	25.0	112.0	80	187	FAJ45K145R++YWPN
450	1.5	38.0	28.0	14.0	25.0	120.0	80	187	FAJ45K155R++YWPN
450	1.6	38.0	28.0	14.0	25.0	128.0	80	187	FAJ45K165R++YWPN
450	1.8	38.0	28.0	14.0	25.0	144.0	80	187	FAJ45K185R++YWPN
450	2.0	38.0	28.0	16.0	25.0	160.0	80	187	FAJ45K205R++YWPN
450	2.2	38.0	28.0	16.0	25.0	176.0	80	187	FAJ45K225R++YWPN
450	2.5	38.0	30.0	18.0	25.0	200.0	80	187	FAJ45K255R++YWPN
450	2.8	38.0	30.0	18.0	25.0	224.0	80	187	FAJ45K285R++YWPN
450	3.0	38.0	33.0	18.0	25.0	240.0	80	187	FAJ45K305R++YWPN
450	3.5	38.0	33.0	18.0	25.0	280.0	80	187	FAJ45K355R++YWPN
450	4.0	38.0	37.0	22.0	25.0	320.0	80	187	FAJ45K405R++YWPN
450	4.5	38.0	37.0	22.0	25.0	360.0	80	187	FAJ45K455R++YWPN
450	5.0	38.0	37.0	22.0	25.0	400.0	80	187	FAJ45K505R++YWPN
450	5.5	38.0	41.0	26.0	25.0	440.0	80	187	FAJ45K555R++YWPN
450	6.0	38.0	41.0	26.0	25.0	480.0	80	187	FAJ45K605R++YWPN
450	6.5	38.0	41.0	26.0	25.0	520.0	80	187	FAJ45K655R++YWPN
450	7.0	38.0	45.0	30.0	25.0	560.0	80	187	FAJ45K705R++YWPN
450	7.5	38.0	45.0	30.0	25.0	600.0	80	187	FAJ45K755R++YWPN
450	8.0	38.0	45.0	30.0	25.0	640.0	80	187	FAJ45K805R++YWPN
450	8.5	38.0	45.0	30.0	25.0	680.0	80	187	FAJ45K855R++YWPN

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

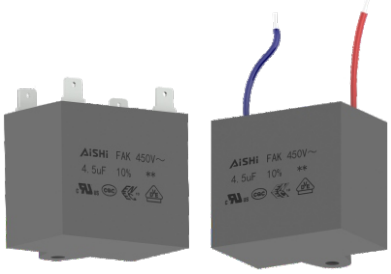
FAJ series

Technical data

Vac	Cap	Dimensions			PA	Peak	dv/dt	Tabs	Part
	Value	W	H	T		Current		AMP	Number
	μF	mm	mm	mm	mm	A	V/us	#	
450	2.0	48.0	27.0	15.0	35.0	100.0	50	250	FAJ45K205S++YXPN
450	2.5	48.0	27.0	15.0	35.0	125.0	50	250	FAJ45K255S++YXPN
450	3.0	48.0	28.0	16.0	35.0	150.0	50	250	FAJ45K305S++YXPN
450	3.5	48.0	30.0	18.0	35.0	175.0	50	250	FAJ45K355S++YXPN
450	4.0	48.0	30.0	18.0	35.0	200.0	50	250	FAJ45K405S++YXPN
450	4.5	48.0	33.0	19.0	35.0	225.0	50	250	FAJ45K455S++YXPN
450	5.0	48.0	33.0	21.0	35.0	250.0	50	250	FAJ45K505S++YXPN
450	5.5	48.0	34.0	22.0	35.0	275.0	50	250	FAJ45K555S++YXPN
450	6.0	48.0	36.0	24.0	35.0	300.0	50	250	FAJ45K605S++YXPN
450	6.5	48.0	36.0	24.0	35.0	325.0	50	250	FAJ45K655S++YXPN
450	7.0	48.0	36.0	24.0	35.0	350.0	50	250	FAJ45K705S++YXPN
450	7.5	48.0	38.0	26.0	35.0	375.0	50	250	FAJ45K755S++YXPN
450	8.0	48.0	40.0	28.0	35.0	400.0	50	250	FAJ45K805S++YXPN
450	8.5	48.0	40.0	28.0	35.0	425.0	50	250	FAJ45K855S++YXPN
450	9.0	48.0	40.0	28.0	35.0	450.0	50	250	FAJ45K905S++YXPN
450	9.5	48.0	44.0	30.0	35.0	475.0	50	250	FAJ45K955S++YXPN
450	10.0	48.0	45.0	30.0	35.0	500.0	50	250	FAJ45K106S++YXPN

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

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

- Widely used in 50/60Hz single phase AC motor for starting or running.

Features

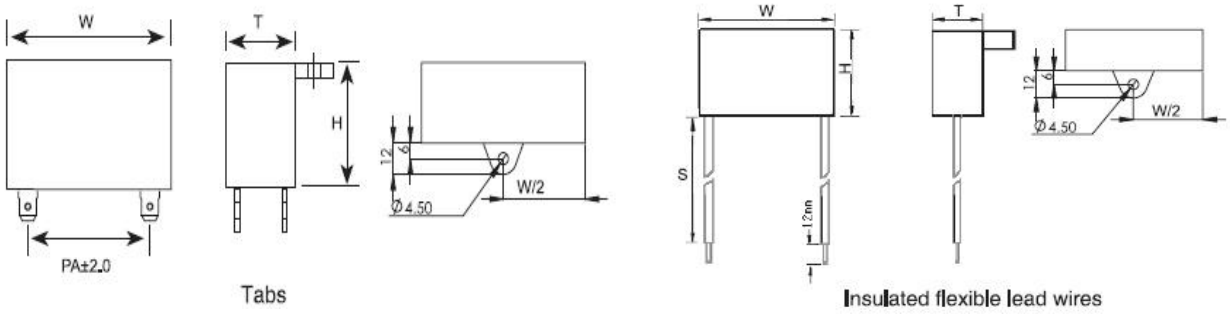
- High performance and high reliability
- Self-healing property
- Over voltage stress withstanding
- Flame-retardant plastic case and resin
- Safety class S3, with segmented film design

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_R 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 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
Endurance Test	Test conditions & performance:
	Temperature: +85°C ±2°C Voltage applied:1.35 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤40 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit

FAK series

Dimensions



Dimensions - Case

Unit: mm

Case Code	W	H	T	PA	AWG
	±1.0	±1.0	±1.0	±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

FAK series

Technical data

Vac	Cap	Dimensions			PA	Peak	dv/dt	Tabs	Part
	Value	W	H	T		Current		AMP	Number
	μF	mm	mm	mm	mm	A	V/us	#	
450	2.5	48.0	28.0	16.0	35.0	125.0	50	250	FAK45K255S++HXPN
450	3.0	48.0	29.0	17.0	35.0	150.0	50	250	FAK45K305S++HXPN
450	3.5	48.0	30.0	18.0	35.0	175.0	50	250	FAK45K355S++HXPN
450	3.5	48.0	34.0	24.0	35.0	175.0	50	250	FAK45J355S++HXPN
450	4.0	48.0	31.0	19.0	35.0	200.0	50	250	FAK45K405S++HXPN
450	4.0	48.0	34.0	24.0	35.0	200.0	50	250	FAK45J405S++HXPN
450	4.5	48.0	32.0	20.0	35.0	225.0	50	250	FAK45K455S++HXPN
450	4.5	48.0	34.0	24.0	35.0	225.0	50	250	FAK45J455S++HXPN
450	5.0	48.0	33.0	21.0	35.0	250.0	50	250	FAK45K505S++HXPN
450	5.0	48.0	34.0	24.0	35.0	250.0	50	250	FAK45J505S++HXPN
450	5.5	48.0	34.0	22.0	35.0	275.0	50	250	FAK45K555S++HXPN
450	5.5	48.0	34.0	24.0	35.0	275.0	50	250	FAK45J555S++HXPN
450	6.0	48.0	34.0	24.0	35.0	300.0	50	250	FAK45K605S++HXPN
450	6.3	48.0	34.0	24.0	35.0	315.0	50	250	FAK45K635S++HXPN
450	6.5	48.0	36.0	24.0	35.0	325.0	50	250	FAK45J655S++HXPN
450	6.5	48.0	34.0	24.0	35.0	325.0	50	250	FAK45K655S++HXPN
450	7.0	48.0	37.0	25.0	35.0	350.0	50	250	FAK45K705S++HXPN
450	7.0	48.0	40.0	30.0	35.0	350.0	50	250	FAK45J705S++HXPN
450	7.5	48.0	38.0	26.0	35.0	375.0	50	250	FAK45K755S++HXPN
450	7.5	48.0	40.0	30.0	35.0	375.0	50	250	FAK45J755S++HXPN
450	8.0	48.0	38.0	28.0	35.0	400.0	50	250	FAK45K805S++HXPN
450	8.0	48.0	40.0	30.0	35.0	400.0	50	250	FAK45J805S++HXPN
450	8.5	48.0	40.0	28.0	35.0	425.0	50	250	FAK45K855S++HXPN
450	8.5	48.0	40.0	30.0	35.0	425.0	50	250	FAK45J855S++HXPN
450	9.0	48.0	40.0	30.0	35.0	450.0	50	250	FAK45K905S++HXPN
450	9.0	48.0	45.0	34.0	35.0	450.0	50	250	FAK45J905S++HXPN
450	9.5	48.0	40.0	30.0	35.0	475.0	50	250	FAK45K955S++HXPN
450	9.5	48.0	45.0	34.0	35.0	475.0	50	250	FAK45J955S++HXPN
450	10.0	48.0	42.0	30.0	35.0	500.0	50	250	FAK45K106S++HXPN
450	10.0	48.0	45.0	34.0	35.0	500.0	50	250	FAK45J106S++HXPN
450	12.0	48.0	45.0	34.0	35.0	600.0	50	250	FAK45K126S++HXPN

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

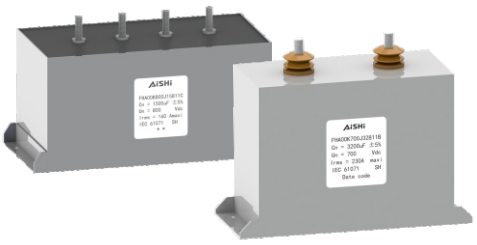
FAK series

Technical data

Vac	Cap	Dimensions			PA	Peak	dv/dt	Tabs	Part Number
	Value	W	H	T		Current		AMP	
	μF	mm	mm	mm	mm	A	V/us	#	
450	0.5	38.0	22.0	13.0	25.0	40.0	80	187	FAK45K504R++YWPN
450	1.0	38.0	22.0	13.0	25.0	80.0	80	187	FAK45K105R++YWPN
450	1.0	38.0	27.0	16.0	25.0	80.0	80	187	FAK45J105R++YWPN
450	1.2	38.0	24.0	14.0	25.0	96.0	80	187	FAK45K125R++YWPN
450	1.2	38.0	27.0	16.0	25.0	96.0	80	187	FAK45J125R++YWPN
450	1.4	38.0	25.0	15.0	25.0	112.0	80	187	FAK45K145R++YWPN
450	1.4	38.0	27.0	16.0	25.0	112.0	80	187	FAK45J145R++YWPN
450	1.5	38.0	30.0	16.0	25.0	120.0	80	187	FAK45K155R++YWPN
450	1.5	38.0	29.0	18.0	25.0	120.0	80	187	FAK45J155R++YWPN
450	1.6	38.0	30.0	16.0	25.0	128.0	80	187	FAK45K165R++YWPN
450	1.6	38.0	29.0	18.0	25.0	128.0	80	187	FAK45J165R++YWPN
450	1.8	38.0	30.0	16.0	25.0	144.0	80	187	FAK45K185R++YWPN
450	1.8	38.0	29.0	18.0	25.0	144.0	80	187	FAK45J185R++YWPN
450	2.0	38.0	30.0	16.0	25.0	160.0	80	187	FAK45K205R++YWPN
450	2.0	38.0	29.0	18.0	25.0	160.0	80	187	FAK45J205R++YWPN
450	2.2	38.0	29.0	18.0	25.0	176.0	80	187	FAK45K225R++YWPN
450	2.2	38.0	32.0	22.0	25.0	176.0	80	187	FAK45J225R++YWPN
450	2.5	38.0	30.0	18.0	25.0	200.0	80	187	FAK45K255R++YWPN
450	2.5	38.0	32.0	22.0	25.0	200.0	80	187	FAK45J255R++YWPN
450	2.8	38.0	31.0	20.0	25.0	224.0	80	187	FAK45K285R++YWPN
450	2.8	38.0	32.0	22.0	25.0	224.0	80	187	FAK45J285R++YWPN
450	3.0	38.0	31.0	20.0	25.0	240.0	80	187	FAK45K305R++YWPN
450	3.5	38.0	33.0	21.0	25.0	280.0	80	187	FAK45K355R++YWPN
450	4.0	38.0	34.0	22.0	25.0	320.0	80	187	FAK45K405R++YWPN
450	4.5	38.0	36.0	24.0	25.0	360.0	80	187	FAK45K455R++YWPN
450	5.0	38.0	37.0	25.0	25.0	400.0	80	187	FAK45K505R++YWPN
450	5.5	38.0	38.0	26.0	25.0	440.0	80	187	FAK45K555R++YWPN
450	6.0	38.0	39.0	27.0	25.0	480.0	80	187	FAK45K605R++YWPN
450	6.5	38.0	40.0	28.0	25.0	520.0	80	187	FAK45K655R++YWPN
450	7.0	38.0	42.0	28.0	25.0	560.0	80	187	FAK45K705R++YWPN
450	8.0	38.0	44.0	30.0	25.0	640.0	80	187	FAK45K805R++YWPN

* 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

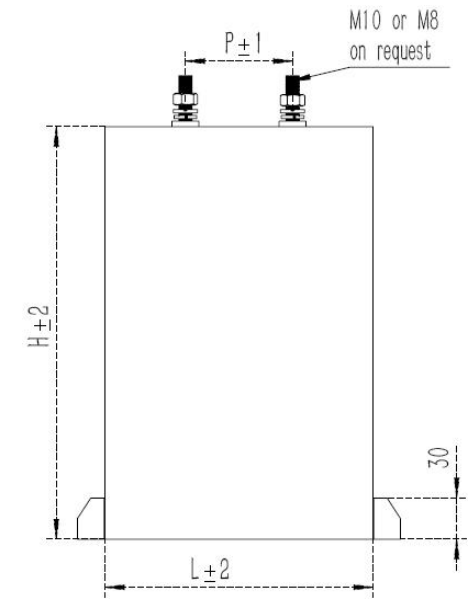
Specifications

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 (Irms 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 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 : 21 days
	Capacitance change : ≤±2%
Endurance Test	Test conditions & performance:
	Temperature: +70°C±2°C Voltage applied:1.3 X V_R (d.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±3%

FHA series

Terminal Configuration

Fig1. Capacitor with 2 terminals



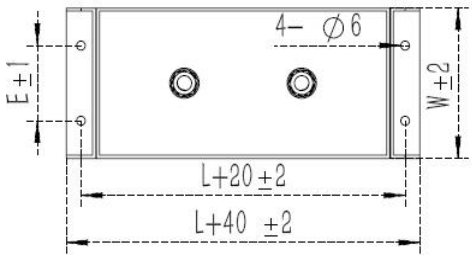
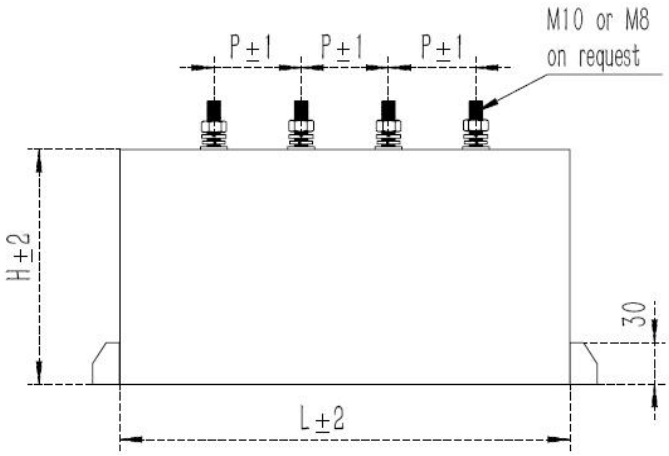
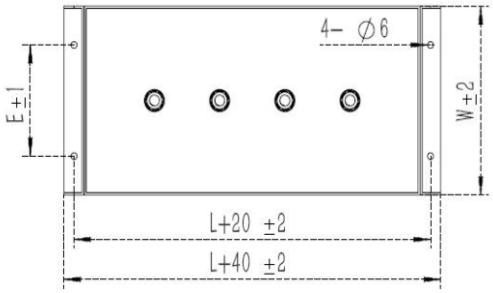


Fig2. Capacitor with 4 terminals





FHA series

Terminal Configuration

Fig3. Capacitor with 6 terminals

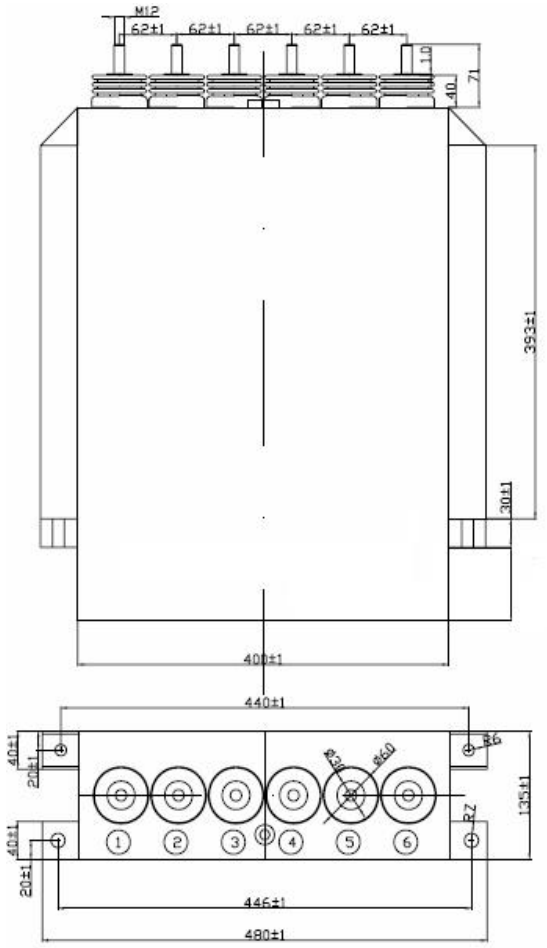
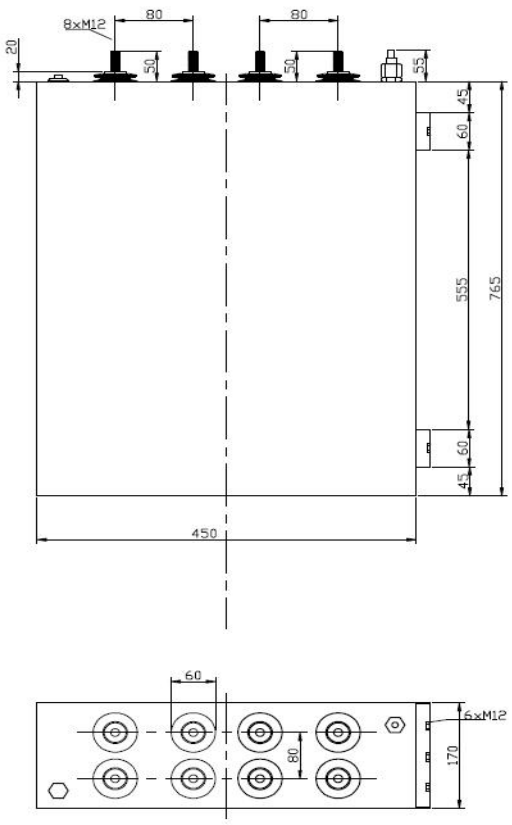


Fig4. Capacitor with 8 terminals



FHA series

Technical data

No	Ordering Code	Un(Vdc)	Cn(μF)	Dimension (mm)			Case type
				L	H	W	
1	FHA00K700J32811B	700	3200	180	190	200	Fig 1
2	FHA00K800J15811C	800	1500	306	99	145	Fig 2.
3	FHA01K000J11811C	1000	1100	430	108	130	Fig 2.
4	FHA00K800J65811C	800	6500	340	245	125	Fig 2.
5	FHA00K900J17911D	900	17500	400	540	135	Fig 3.
6	FHA01K300J19911D	1300	19000	450	765	170	Fig 4.

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

FHA series

Part numbering system

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F	H	A	0	3	K	8	1	0	J	1	0	8	2	1	D
①	②					③			④		⑤		⑥	⑦	⑧

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