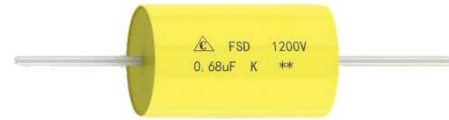


Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

FSD series

Overview

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



Typical Applications

- 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

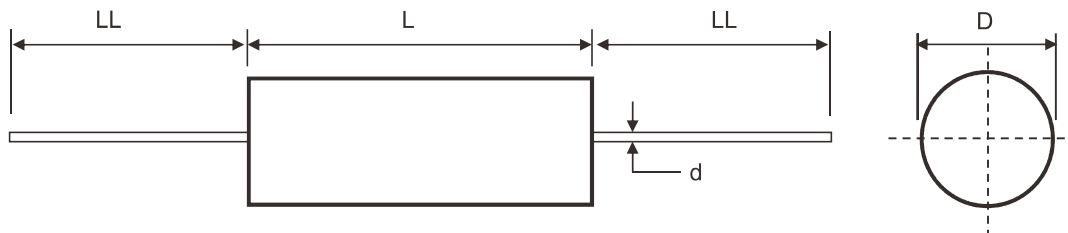
Specifications

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 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH. RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance: Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2% Test duration : 56 days Capacitance change : ≤±5% DF change (Δtgδ): ≤20 X 10 ⁻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 (Δtgδ): ≤20 X 10 ⁻⁴ at 1KHz Insulation resistance: ≥50% of initial limit

Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

FSD series

■ Dimensions



■ Dimensions - Lead wires

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

Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

FSD series

Technical data

Vdc	Cap	Dimensions		I _{rms}	Peak	ESR _{Typical}	ESL	dv/dt	Lead Wire	Part Number
	Value	D	L	100KHz	Current	100KHz		V/us		
	μF	mm max	mm max	70°C A	A	mΩ		nH		
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	FSD3BK334034XLLN
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

Snubber Capacitors

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Metallized Polypropylene Film Capacitor (Axial Lead) Snubber Applications

FSD series

■ Technical data

Vdc	Cap	Dimensions		I _{rms}	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				
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

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