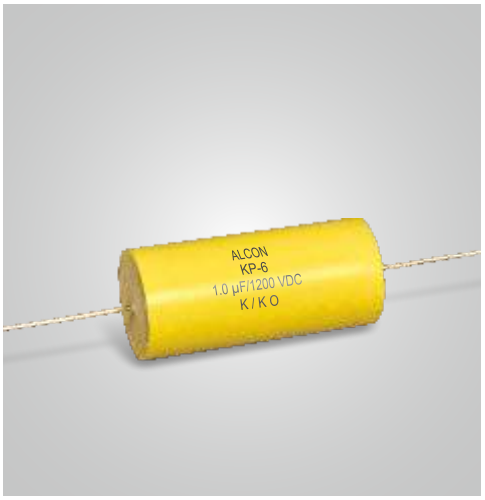
SNUBBER CAPACITOR WITH AXIAL LEADS

KP-6

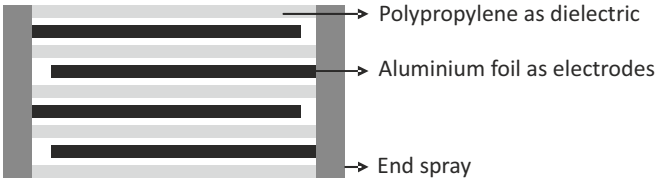


Highlights

- High DV/DT
- Low ESR
- Low loss polypropylene dielectric
- Impregnated elements eliminate corona
- Flame retardant UL94 - V0, ROHS compliant

Construction

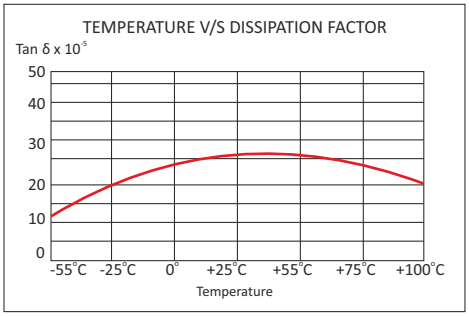
Extended foil electrodes and polypropylene film dielectric impregnated

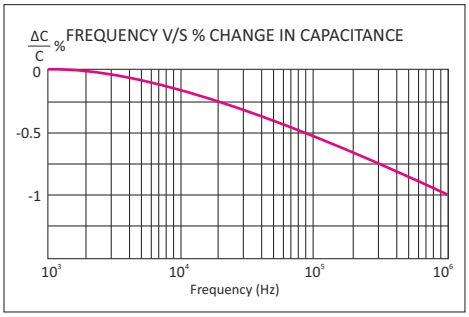


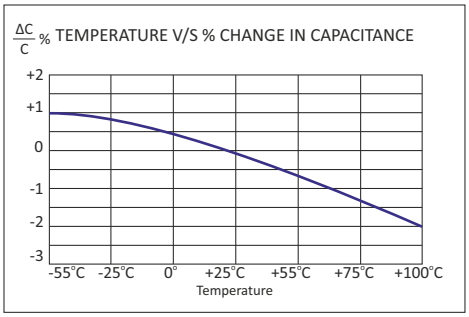
Applications

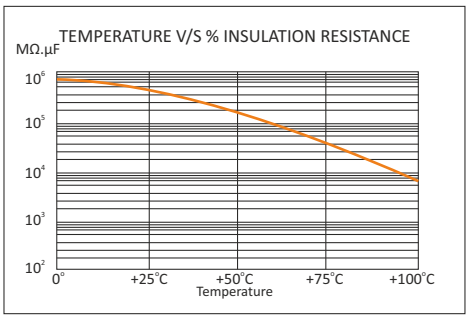
These capacitors are used in high voltage and high current applications such as:

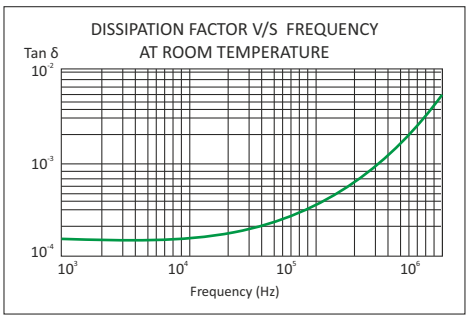
- Snubber networks
- Energy conversion and control in power electronics
- Noise suppressors in switching circuits











KP-6

Technical Specifications

Physical Characteristics

▪ Dielectric material	Polypropylene film.
▪ Electrode material	Aluminium foil
▪ Winding construction	Extended foil electrodes and polypropylene film dielectric impregnated
▪ Terminals	Tinned copper
▪ Enclosure	Preformed UL 94 V-0 plastic case with thermosetting resin-fill

Electrical Characteristics

▪ Capacitance range	0.01 MFD to 2.0 MFD
▪ Capacity tolerance	±5%(J), ±10%(K)
▪ Rated voltage VDC	850, 1200, 2000, 2500, 3000
▪ Rated voltage VAC	450, 500, 630, 700, 750
▪ Test voltage between terminals	Working voltage ≤ 2000VDC 2.5 x rated voltage VDC for 2 seconds Working voltage ≥ 2000VDC 2.0 x rated voltage VDC for 2 seconds
▪ Dissipation factor (Tan d)	≤ 0.0005 at 1KHz and 25°C
▪ Temperature range	- 25°C to +85°C
▪ Insulation resistance at 25°C & at a test voltage of 500 VDC applied for 1 minute	C ≤ 0.33 MFD ≥50,000MΩ C > 0.33 MFD ≥30,000MΩ

Marking on Capacitors

Each capacitor will have the following information printed on it, sequentially:

- The Company name in words ALCON
- The capacitor grade viz KP-6
- The capacitance value MFD
- The rated voltage VDC
- Capacity tolerance and manufacturing code
- Part number on non-standard capacitors

KP-6

Standard Capacitor Values

Working Voltage 850 VDC (450 VAC)

Rated Capacitance MFD	Dimensions in mm*			Case Code	DV/DT V/µ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at100KHz mΩ	Ordering Code
	D	L	d						
0.100	17.0	35.0	0.8	O3	1100	110.00	6.00	12.00	SI00U100850AJ0O30AXLK01
0.150	17.0	35.0	0.8	O3	1100	165.00	6.00	11.50	SI00U150850AJ0O30AXLK01
0.220	19.0	42.0	0.8	O4	1000	220.00	7.00	10.20	SI00U220850AJ0O40AXLK01
0.330	19.0	42.0	1.0	O4	1000	330.00	7.00	9.00	SI00U330850AJ0O40AXLK01
0.470	19.0	55.0	1.0	O7	900	423.00	8.00	8.60	SI00U470850AJ0O70AXLK01
0.680	19.0	55.0	1.0	O7	900	612.00	8.00	8.30	SI00U680850AJ0O70AXLK01
1.000	25.0	55.0	1.2	O5	900	900.00	10.00	7.60	SI000010850AJ0O50AXLK01
1.200	25.0	55.0	1.2	O5	900	1080.00	11.00	7.20	SI01U200850AJ0O50AXLK01
1.500	25.0	55.0	1.2	O5	900	1350.00	12.00	6.80	SI01U500850AJ0O50AXLK01
2.000	30.0	55.0	1.2	O6	900	1800.00	12.00	5.60	SI000020850AJ0O60AXLK01

Working Voltage 1200 VDC (500 VAC)

Rated Capacitance MFD	Dimensions in mm*			Case Code	DV/DT V/µ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at100KHz mΩ	Ordering Code
	D	L	d						
0.047	15.0	23.0	0.8	O1	1400	65.00	5.00	18.00	SI0U0471200AJ0O10AXLK01
0.068	15.0	23.0	0.8	O2	1400	95.00	6.00	13.00	SI0U0681200AJ0O20AXLK01
0.100	17.0	35.0	1.0	O3	1300	130.00	8.00	11.00	SI00U101200AJ0O30AXLK01
0.150	17.0	35.0	1.0	O3	1300	195.00	8.20	8.20	SI00U151200AJ0O30AXLK01
0.220	19.0	42.0	1.0	O4	1200	264.00	8.20	7.80	SI00U221200AJ0O40AXLK01
0.330	19.0	42.0	1.0	O4	1200	396.00	9.10	7.30	SI00U331200AJ0O40AXLK01
0.470	19.0	55.0	1.0	O7	1000	470.00	11.00	6.80	SI00U471200AJ0O70AXLK01
0.680	19.0	55.0	1.2	O7	1000	680.00	12.00	5.30	SI00U681200AJ0O70AXLK01
1.000	25.0	55.0	1.2	O5	1000	1000.00	12.00	5.00	SI000011200AJ0O50AXLK01
1.200	30.0	55.0	1.2	O6	1000	1200.00	12.00	4.80	SI01U201200AJ0O60AXLK01
1.500	30.0	55.0	1.2	O6	1000	1500.00	12.00	4.20	SI01U501200AJ0O60AXLK01

Working Voltage 2000 VDC (630 VAC)

Rated Capacitance MFD	Dimensions in mm*			Case Code	DV/DT V/µ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at100KHz mΩ	Ordering Code
	D	L	d						
0.010	12.0	23.0	0.8	O1	1700	17.00	3.00	42.00	SI0U0102000AJ0O10AXLK01
0.015	15.0	23.0	0.8	O2	1700	26.00	4.00	40.30	SI0U0152000AJ0O20AXLK01
0.022	15.0	23.0	0.8	O2	1700	37.00	6.00	36.50	SI0U0222000AJ0O20AXLK01
0.033	17.0	35.0	0.8	O3	1700	56.00	7.00	24.20	SI0U0332000AJ0O30AXLK01
0.047	17.0	35.0	0.8	O3	1700	80.00	8.00	15.30	SI0U0472000AJ0O30AXLK01
0.068	17.0	35.0	1.0	O3	1700	116.00	9.00	14.20	SI0U0682000AJ0O30AXLK01
0.100	19.0	42.0	1.0	O4	1000	100.00	9.00	8.60	SI00U102000AJ0O40AXLK01
0.150	19.0	42.0	1.0	O4	1000	150.00	10.00	7.20	SI00U152000AJ0O40AXLK01
0.220	25.0	55.0	1.0	O5	900	198.00	11.00	6.50	SI00U222000AJ0O50AXLK01
0.330	30.0	55.0	1.2	O6	900	297.00	11.00	4.60	SI00U332000AJ0O60AXLK01

Custom-designed capacitors are available on request

* Refer to “Capacitor Drawing”on page 53

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Standard Capacitor Values

Working Voltage 2500 VDC (700 VAC)

Rated Capacitance MFD	Dimensions in mm*			Case Code	DV/DT V/µ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at100KHz mΩ	Ordering Code
	D	L	d						
0.033	17.0	35.0	0.8	O3	1500	49.50	4.00	20.00	SI0U0332500AJ0O30AXLK01
0.047	17.0	35.0	0.8	O3	1500	70.50	6.00	13.00	SI0U0472500AJ0O30AXLK01
0.068	17.0	35.0	1.0	O3	1500	102.00	8.20	11.00	SI0U0682500AJ0O30AXLK01
0.100	19.0	42.0	1.0	O4	1200	120.00	8.20	8.90	SI00U102500AJ0O40AXLK01
0.150	19.0	42.0	1.2	O4	1200	180.00	8.20	7.70	SI00U152500AJ0O40AXLK01
0.220	19.0	55.0	1.2	O7	1000	220.00	9.10	6.90	SI00U222500AJ0O70AXLK01
0.330	25.0	55.0	1.2	O5	1000	330.00	10.80	5.80	SI00U332500AJ0O50AXLK01
0.470	25.0	55.0	1.2	O5	1000	470.00	12.00	4.20	SI00U472500AJ0O50AXLK01

Working Voltage 3000 VDC (750 VAC)

Rated Capacitance MFD	Dimensions in mm*			Case Code	DV/DT V/µ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at100KHz mΩ	Ordering Code
	D	L	d						
0.010	12.0	23.0	0.8	O1	2800	28.00	2.00	62.00	SI0U0103000AJ0O10AXLK01
0.015	12.0	23.0	0.8	O1	2800	42.00	3.00	41.00	SI0U0153000AJ0O10AXLK01
0.022	15.0	23.0	0.8	O2	2800	62.00	4.00	28.00	SI0U0223000AJ0O20AXLK01
0.033	17.0	35.0	1.0	O3	1500	50.00	5.00	19.80	SI0U0333000AJ0O30AXLK01
0.047	19.0	55.0	1.0	O3	1000	47.00	6.50	18.00	SI0U0473000AJ0O30AXLK01
0.068	19.0	55.0	1.0	O7	1000	68.00	8.00	12.50	SI0U0683000AJ0O70AXLK01
0.100	19.0	55.0	1.2	O7	1000	100.00	8.00	8.90	SI00U103000AJ0O70AXLK01
0.150	19.0	55.0	1.2	O7	1000	150.00	11.00	6.70	SI00U153000AJ0O70AXLK01
0.220	25.0	55.0	1.2	O5	1000	220.00	12.00	4.80	SI00U223000AJ0O50AXLK01
0.330	30.0	55.0	1.2	O6	1000	330.00	12.00	4.20	SI00U333000AJ0O60AXLK01

Custom-designed capacitors are available on request

* Refer to “Capacitor Drawing”on page 53

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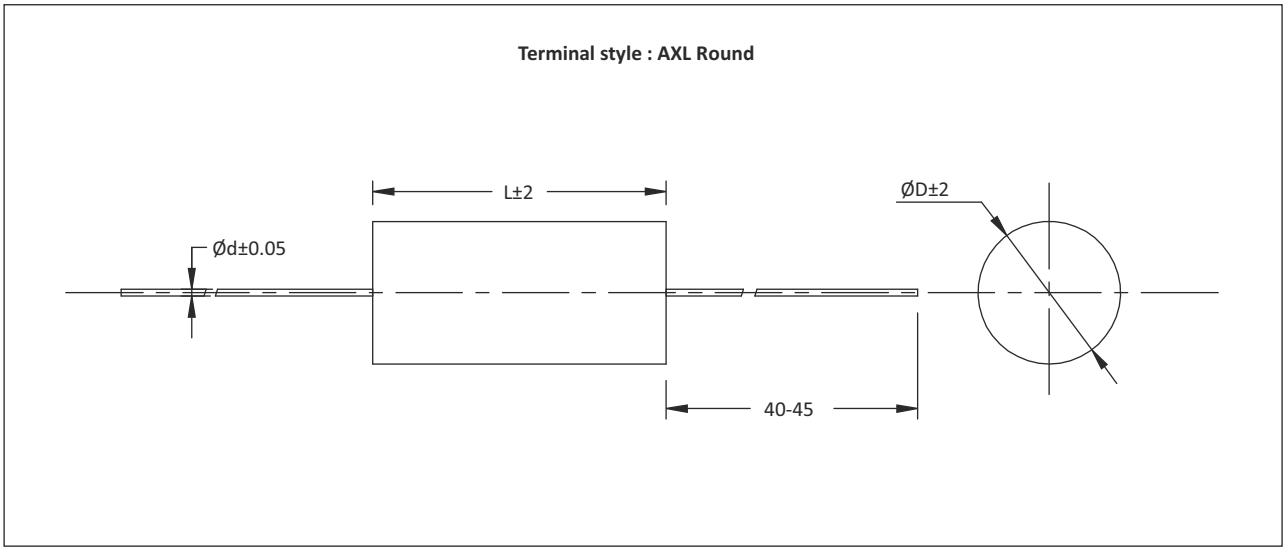
Capacitor Drawing and Terminal Style



Dimensions in mm

Precaution

1. These capacitors are not suitable for 'across the line' applications
2. VAC (rated) : Frequency should be less than 1000Hz
3. VDC(rated) : 1.4 x Vrms + VDC should be less than rated VDC

Part Number System

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	**2**	**3 to 7**					**8 to 11**				**12 to 13**		**14 to 16**			**17 to 20**				**21**	**22 to 23**	

Standard / Non-standard

S - Standard

N - Non-standard

Series

A - Aluminium Electrolytic Capacitors

I - IGBT Snubber Capacitors

D - DC-Link Capacitors

P - Power Film Capacitors

Capacitance Rating

example : 00U68 - 0.680 MFD
01U50 - 1.50 MFD
00001 - 1.00 MFD
05U60 - 5.6 MFD
00003 - 3.00 MFD

Voltage Rating

example : 1000 - 1000 VDC/VRMS
0450 - 450 VDC/VRMS
0700 - 700 VDC/VRMS
2500 - 2500 VDC/VRMS

Grade

example : AG - KP3C
AJ - KP6
AK - MP4A
AM - MKR9
AN - MKRS

Case code

(Refer table)

Terminal Style

Refer Table
Drawing

Tolerance

M : ±20%
K : ±10%
J : ±5%

Canias Code

By Default - 01

Cautions For Proper Use Of Film Capacitors

SAFETY INSTRUCTION

- Do not exceed the upper category temperature (UCT).
- Do not apply any mechanical stress to the capacitor terminals.
- Avoid any compressive, tensile or flexural stress.
- Do not move the capacitor after it has been assembled
- Do not exceed the specified torque limits during assembly.
- Avoid external energy inputs, such as fire or electricity.
- Avoid overload of the capacitors.
- Consult us if application is with severe temperature and humidity condition.
- There are no serviceable or repairable parts inside the capacitor. Opening the capacitor or any attempts to open or repair the capacitor will void the warranty and liability of ALCON

DISPOSAL

For disposal do either of the followings.

1. Incineration (at high temperature over 800°C) after piercing or crushing capacitor body.
2. Consignment to specialists of industrial waste. As per the compliance prescribed by the law.

Notes