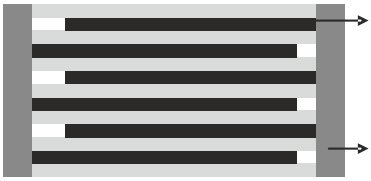
DCL-6

Highlights

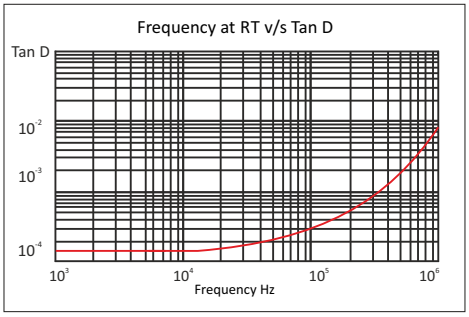
- Special metallized polypropylene film
- Low ESR
- High ripple
- High reliability
- Flame retardancy - UL94-V0

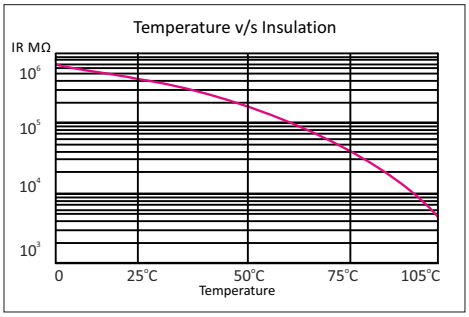
Construction

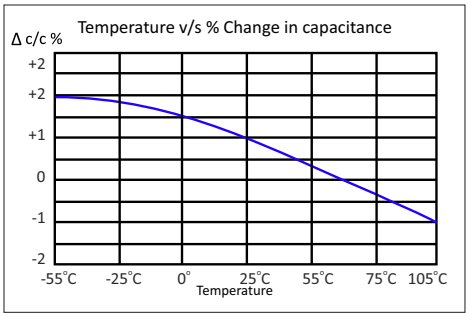


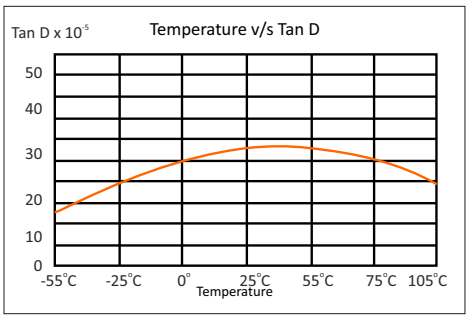
Applications

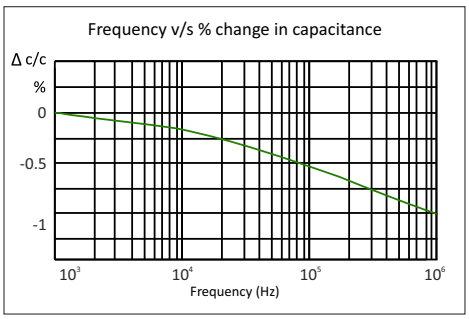
- DC filtering
- Wind power inverters
- Solar power inverters
- Induction heaters
- Electric vehicle inverters
- Motor drives











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DCL-6

Technical Specifications

Physical Characteristics

▪ Dielectric material	Polypropylene film
▪ Electrode material	Metallized polypropylene film
▪ Winding construction	Polypropylene film, metallized polypropylene film
▪ Enclosure	Preformed UL 94-V0 plastic case with thermosetting resin-fill
▪ Terminals	Tinned Copper

Electrical Characteristics

▪ Capacitance range	4.7µF to 120µF
▪ Capacity tolerance	±10%(K)
▪ Rated voltage VDC	400, 500, 600, 750, 800, 900, 1000, 1200, 1500
▪ Test voltage between terminals	1.25 x rated voltage VDC for 60 seconds
▪ Test voltage terminal to case	3KVAC at 50Hz for 60 seconds
▪ Dissipation factor (Tan d)	$\leq$0.002 at 1 KHz and 25°C
▪ Temperature range	-40°C to +85°C
▪ Insulation resistance MΩ x µF	$\geq$10,000 s at 25°C (s = MΩ x µF)
▪ Reference Standard	IEC 61071 and IEC 60068

Marking on Capacitors

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

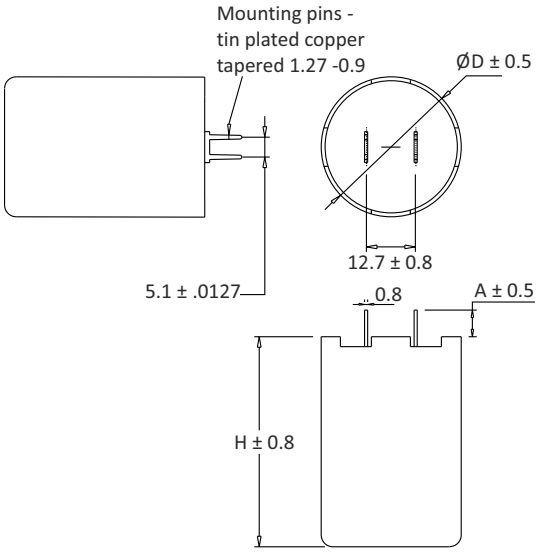
- The Company name in words ALCON
- The capacitor grade viz DCL-6
- The capacitance value MFD
- The rated voltage VDC
- Capacity tolerance and manufacturing code
- Part number on non-standard capacitors

DCL-6

Standard Capacitor Values

Rated voltage VDC	Nominal Capacitance MFD at 1 KHz	Ripple current rating Irms at 10KHz to 100KHz			Typical ESR at 10~100KHz mΩ	DV/DT	Dimensions mm		Terminal Style	Ordering Code
		25°C	50°C	75°C			ØD	H		
400	35.0	24.0	19.0	14.5	6.0	30	36.0	54.0	L2P	SD000350400AO0J70L2PK01
	80.0	35.0	28.0	14.5	5.0	20	50.8	50.8	L3P	SD000800400AO0J60L3PK01
	120.0	38.0	31.0	20.0	4.0	15	63.5	51.4	L3P	SD001200400AO0J80L3PK01
500	35.0	22.0	18.0	13.0	8.0	26	36.0	54.0	L2P	SD000350500AO0J70L2PK01
	75.0	34.0	27.0	14.0	5.1	16	50.8	50.8	L3P	SD000750500AO0J60L3PK01
	110.0	37.0	30.0	19.0	4.2	11	63.5	51.4	L3P	SD001100500AO0J80L3PK01
600	30.0	20.0	17.0	12.0	9.0	30	36.0	54.0	L2P	SD000300600AO0J70L2PK01
	70.0	33.0	26.0	13.0	6.5	22	50.8	50.8	L3P	SD000700600AO0J60L3PK01
	100.0	36.0	29.0	18.5	4.1	17	63.5	51.4	L3P	SD001000600AO0J80L3PK01
750	20.0	19.0	16.0	10.0	10.0	38	36.0	54.0	L2P	SD000200750AO0J70L2PK01
	60.0	30.0	26.0	15.0	4.0	26	50.8	50.8	L3P	SD000600750AO0J60L3PK01
	90.0	35.0	28.0	20.0	3.0	23	63.5	51.4	L3P	SD000900750AO0J80L3PK01
800	15.0	18.5	15.0	9.8	10.0	42	36.0	54.0	L2P	SD000150800AO0J70L2PK01
	60.0	35.0	26.0	15.0	4.0	30	50.8	50.8	L3P	SD000600800AO0J60L3PK01
	90.0	45.0	28.0	20.0	3.0	27	63.5	51.4	L3P	SD000900800AO0J80L3PK01
900	13.50	18.0	14.5	9.6	10.5	43	36.0	54.0	L2P	SD013U50900AO0J70L2PK01
	40.0	34.0	25.0	15.0	4.5	33	50.8	50.8	L3P	SD000400900AO0J60L3PK01
	65.0	43.0	27.0	20.0	4.0	30	63.5	51.4	L3P	SD000650900AO0J80L3PK01
1000	10.0	17.5	13.5	9.0	12.0	50	36.0	54.0	L2P	SD000101000AO0J70L2PK01
	25.0	33.0	24.0	11.0	8.5	40	50.8	50.8	L3P	SD000251000AO0J60L3PK01
	35.0	42.0	26.0	13.0	6.7	37	63.5	51.4	L3P	SD000351000AO0J80L3PK01
1200	7.50	16.0	12.0	8.4	13.5	60	36.0	54.0	L2P	SD07U501200AO0J70L2PK01
	18.0	26.0	20.0	10.0	9.0	50	50.8	50.8	L3P	SD000181200AO0J60L3PK01
	27.0	30.0	25.0	18.0	7.8	47	63.5	51.4	L3P	SD000271200AO0J80L3PK01
1500	4.70	15.0	11.5	7.8	15.0	72	36.0	54.0	L2P	SD04U701500AO0J70L2PK01
	12.0	24.0	19.0	10.0	10.0	62	50.8	50.8	L3P	SD000121500AO0J60L3PK01
	18.0	29.0	22.0	12.0	9.0	59	63.5	51.4	L3P	SD000181500AO0J80L3PK01

Capacitor Drawing and Terminal Style



	L2P	L3P
A	7.0	7.6

Terminal style : L2P/L3P

Dimensions in mm

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**				**12-13**		**14-16**			**17-20**				**21**	**22-23**	

1 **Standard / Non-standard**

S - Standard

N - Non-standard

2 **Series**

A - Aluminium Electrolytic Capacitors

I - IGBT Snubber Capacitors

D - DC-Link Capacitors

P - Power Film Capacitors

3 to 7 **Capacitance Rating**

example : 04U70 - 4.7MFD
00118 - 118 MFD
00030 - 30 MFD
01080 - 1080 MFD
02350 - 2350 MFD

8to11 **Voltage Rating**

example : 0700 - 700 VDC/VRMS
1600 - 1600 VDC/VRMS
1000 - 1000 VDC/VRMS
0900 - 900 VDC/VRMS

12-13 **Grade**

example : AP - DCL- 50
AR - DCL- 41
AQ - DCL- 23
AO - DCL- 6
DC - DCL - 14

14-16 **Case code**

(Refer Standard Capacitor Values Table)

17-20 **Terminal Style**

(Refer Capacitor Drawing and Terminal Styles Page)

21 **Tolerance**

K : ± 10%
J : ± 5%
M : ± 20%

22-23 **By Default**

- 01

Cautions For Proper Use Of Film Capacitor

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