

1.2.2 DC Filter Capacitors DCL series

Applications :

The DCL capacitor is specifically designed for DC filtering, DC Link and low reactive power applications.

Properties :

Low ESR, Low Inductance, High Insulation Resistance, high ripple current capability, flame Retardant Construction with UL94-V0 plastic case and epoxy rein and Easy Installation

Electrical Connections :

DCL-AB : M6 / M8 threaded bolts

DCL-AN : threaded female nuts

Electrical Characteristics :

Capacitance range : 40uF - 150uF

Capacitance Tolerance : +/-5%; +/-10%

Rated Voltage : 800 ~1450Vdc

Ripple Current up to 80A

Equivalent Series Resistance (ESR) : measured at 23C 100kHz

Dissipation factor (DF) : <0.1% 1KHz) at 23C

Testing Voltage : Terminal to Terminal : 1.5 x rated voltage 10sec 23C

Terminal to Case : 4000Vac 60s 23C

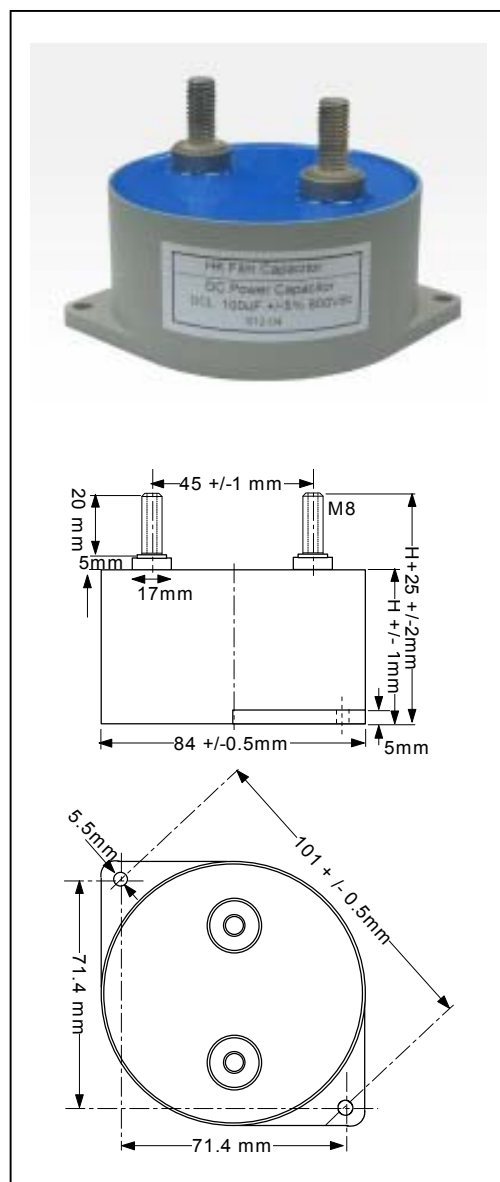
Pulse Voltage rise & fall time dV/dt : detail information available on request

Rated Temperature : -25C to +85C

Options :

Thermocouple can be build-in :

- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function



Specification and Size :

Capacitance uF	Voltage Vdc	H mm	dv/dt v/us	Peak Current I _{peak} A	ESL nH	ESR (mohm) 10KHz	Irms 65C
68	800	44	40	2720	20	0.6	80
100	800	54	30	2800	30	0.8	80
140	800	67	20	2800	40	1.1	80
150	800	67	20	3000	40	1.2	80
47	1000	44	55	2585	20	0.7	76
68	1000	54	40	2720	30	1.0	65
100	1000	67	30	3000	40	1.1	65
47	1250	54	55	2585	30	0.9	50
70	1250	67	35	2450	40	1.1	50
40	1450	54	70	2800	30	0.8	50
60	1450	67	45	2700	40	0.9	50

For any Capacitance value, Voltage, ripple current is not listed above, please feel free to contact us. We might have a direct replacement for your need.

1.2.3 Pulse Current Capacitors / DC Filter Capacitors DCF-03 and DCF-04 series

- medium Frequency range and higher RMS Current
- for 20 - 100kHz frequency

Applications :

For Switching Power Supply input filtering, DC blocking and output filter, welding equipment, DC Filtering application, MMC Capacitors module / Multi-Miniature Capacitors module

Constructions :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

Properties :

Medium Frequency range and RMS Current Capacity; very Low Losses and Low Inductance, High Insulation Resistance; both AC and DC voltage; Flame Retardant Construction; Easy Installation

Electrical Connections :

Large Terminals - to deliver larger discharge current I_{pp} and $I_{r.m.s.}$ when compare with traditional copper tin wires

Electrical Characteristics :

DCF-03QI / DCF-03QL / DCF-03QT – higher RMS current

Rated Voltage : 100 - 400Vdc / 70 - 250Vac

RMS Current up to 30A

DCF-04QI / DCF-04QL / DCF-04QT – smaller size & higher voltage range

Rated Voltage : 250 - 700Vdc / 160 - 400Vac

RMS Current up to 13A

Capacitance range : 1 μ F - 30 μ F

Capacitance Tolerance : +/-5%; +/-10%

Equivalent Series Resistance (ESR) : measured at 25C 100kHz

Dissipation factor (DF) : <0.1% 1KHz) at 23C

Testing Voltage : 2 x U_n 60sec 25C (can be customized design)

Insulation Resistance : Terminal – Terminal : 300,000M ohm 500Vdc 60sec
Terminal – Case : 5000M ohm 500Vdc 60sec

Operate Temperature : -25C - +70C / -25C - +85C / -25C - +105C

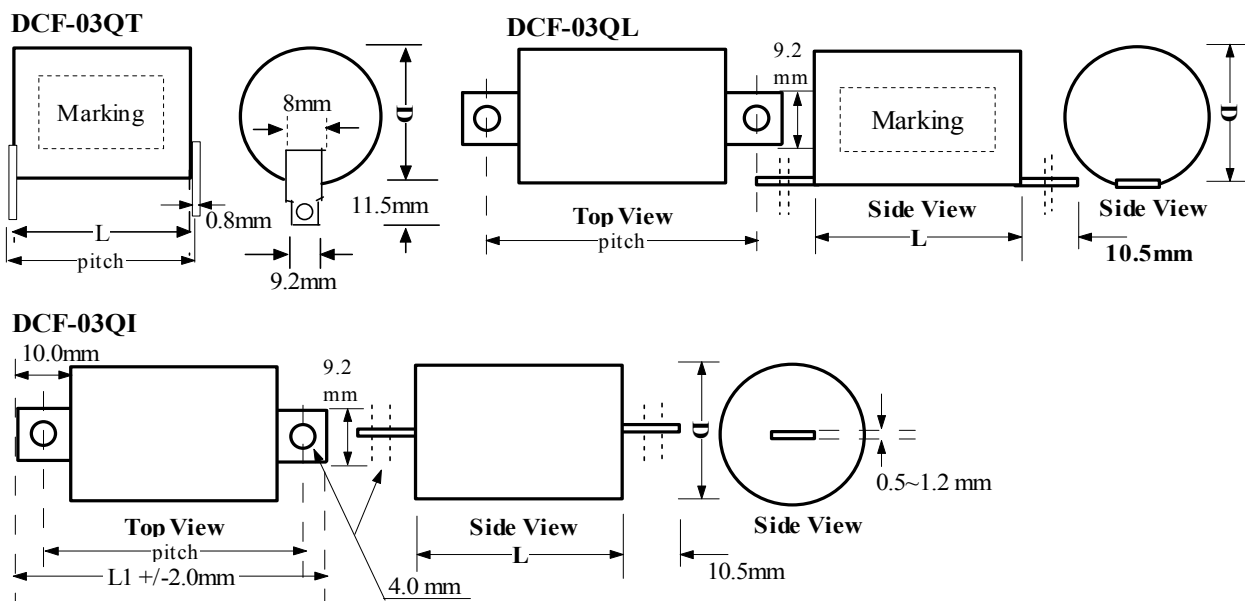
Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

Pulse Voltage rise & fall time dv/dt : detail information available on request

Options :

Thermocouple can be build-in :

- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function



Dimension Tolerance : +/-1mm unless specify

Pulse Current Capacitors / DC Filter Capacitors DCF-03QI series

Specifications and Size : 100Vdc / 75Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	15	31	50	11	9.9	8.9	8.0	6.5	5.2	4.4	22	22	15
2.0 uF	18	33	52	12.5	11.3	10.1	9	7.2	6.4	5.5	38	19	12
2.2 uF	20	33	52	13	11.7	10.5	9.3	7.4	6.6	5.6	41	19	12
3.0 uF	21	38	57	13.5	12.2	10.9	9.8	8.8	7.7	6.5	45	15	11
3.3 uF	22.5	38	57	14	12.4	11.2	10.2	9.0	7.9	6.7	49.5	15	11
5.0 uF	25.5	38	57	15.5	13.1	11.8	10.6	9.6	8.6	7.5	75	15	10
10.0 uF	26.5	42	61	18	15.3	13.7	12.3	11.2	10.0	8.5	100	10	9
20.0 uF	33	52	71	23	19.5	17.5	15.8	14.2	12.8	11	140	7	8
30.0 uF	39	52	71	25	21.2	19.1	17.2	15.4	13.9	12.2	210	7	6

Specifications and Size : 200Vdc / 140Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	18	33	52	8	8	8	8	8	6.8	5.4	15	15	20
2.0 uF	21.5	38	57	14.5	12.3	11	9.9	9	8.1	7.2	22	11	15
2.2 uF	22.5	38	57	15	12.7	11.5	10.3	9.2	8.3	7.3	24.2	11	15
3.0 uF	26	38	57	16	13.6	12.2	11	9.9	8.9	7.5	33	11	13
3.3 uF	27	38	57	16.5	14.8	13.3	12	10.8	9.6	7.7	36.3	11	13
5.0 uF	33	38	57	19	16.2	14.5	13	11	10	8.5	55	11	11
10.0 uF	37.5	50	69	22.5	19	17	15.5	13.9	12.5	10.6	100	10	9
20.0 uF	44.5	65	86	28	23.8	21	18.9	16	14.5	13	140	7	6

Specifications and Size : 400Vdc / 270Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	19.5	38	57	9.5	9.5	9.5	9.5	8.3	7.5	6.7	20	20	18
2.0 uF	22	50	69	15	15	15	14.2	12.4	10.5	8.5	32	16	15
2.2 uF	22.5	50	69	15.5	15.5	15.5	14.7	12.9	11	9.0	35	16	15
3.0 uF	26	50	69	21	17.8	16	15.2	13.7	11.6	9.6	48	16	11
3.3 uF	27	50	69	21.5	18	16.4	15	13.8	12.4	9.8	52	16	11
5.0 uF	28	65	86	24.4	20.7	18.6	16.7	15	13.5	11.5	55	11	8
10.0 uF	40	65	86	30	25.5	22.9	20.5	18.5	16.6	14.5	110	11	6

For other Capacitance, Voltage, r.m.s. Current and Peak Pulse Current not listed, please contact us for details.

Pulse Current Capacitors / DC Filter Capacitors DCF-04QI series

Specifications and Size : 250Vdc / 160Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
1	11.5	22	43	2.4	99	99	5.4
1.5	10.5	34	55	4.9	55	82.5	7.1
2.2	11.5	34	55	3.3	55	121	9.1
2.5	12.5	34	55	3	55	138	9.1
3	14	34	55	2.6	55	165	9.1
5	17.5	34	55	1.9	55	275	9.7
6.8	20.5	34	55	1.6	55	374	9.7
10	20.5	45	66	1.9	33	330	9.7
15	25	45	66	1.4	33	495	13.2
20	28.5	45	66	1.3	33	660	13.2
25	32	45	66	1.3	33	825	13.2
30	30	58	79	2.3	22	660	13.2

Specifications and Size : 400Vdc / 250Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
0.68	10.5	34	55	6.7	77	53	6.1
1	12.5	34	55	4.6	77	77	8.1
1.5	15	34	55	3.2	77	116	9.1
2	17	34	55	2.6	77	154	9.7
2.2	18	34	55	2.5	77	169	9.7
2.5	19	34	55	2.3	77	193	9.7
3	20.5	34	55	2.1	77	231	9.7
4	20	45	66	2.7	55	220	9.7
4.7	21.5	45	66	2.4	55	259	10.8
5	22	45	66	2.3	55	275	10.8
6.8	25.5	45	66	1.9	55	374	13.2
10	30.5	45	66	1.6	55	550	13.2
15	32.5	58	77	2.8	33	495	13.2

Specifications and Size : 600Vdc / 330Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
1	16	34	55	3.8	110	110	9.7
2	19	45	66	3.7	83	166	9.7
2.2	20	45	66	3.5	83	183	9.7
3	23	45	66	2.8	83	249	10.8
4.7	28	45	66	2.1	83	390	13.2
5	29	45	66	2	83	415	13.2
6.8	29	58	79	4.1	55	374	13.2
10	35	58	79	3.2	55	550	13.2

Specifications and Size : 700Vdc / 400Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
0.68	17.5	34	55	4.1	138	94	9.7
1	21	34	55	3.1	138	138	10.8
1.5	21	45	66	3.8	99	149	10.8
2	24	45	66	3	99	198	13.2
2.2	25	45	66	2.8	99	218	13.2
3	29	45	66	2.3	99	297	13.2
4	33.5	45	66	2	99	396	13.2
4.7	30	58	79	4.7	66	310	13.2
5	31	58	79	4.4	66	330	13.2