

4.2 DC Pulse Current Capacitors / DC Filter Capacitors

DCF-03 and DCF-04 series

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

Applications :

DC/AC applications, 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 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 : 0.68uF - 30uF

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

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

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

Testing Voltage : $2 \times U_n$ 60sec 25C (can be customized design)

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

Terminal – Case : 5000M ohm 500Vdc 60sec

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

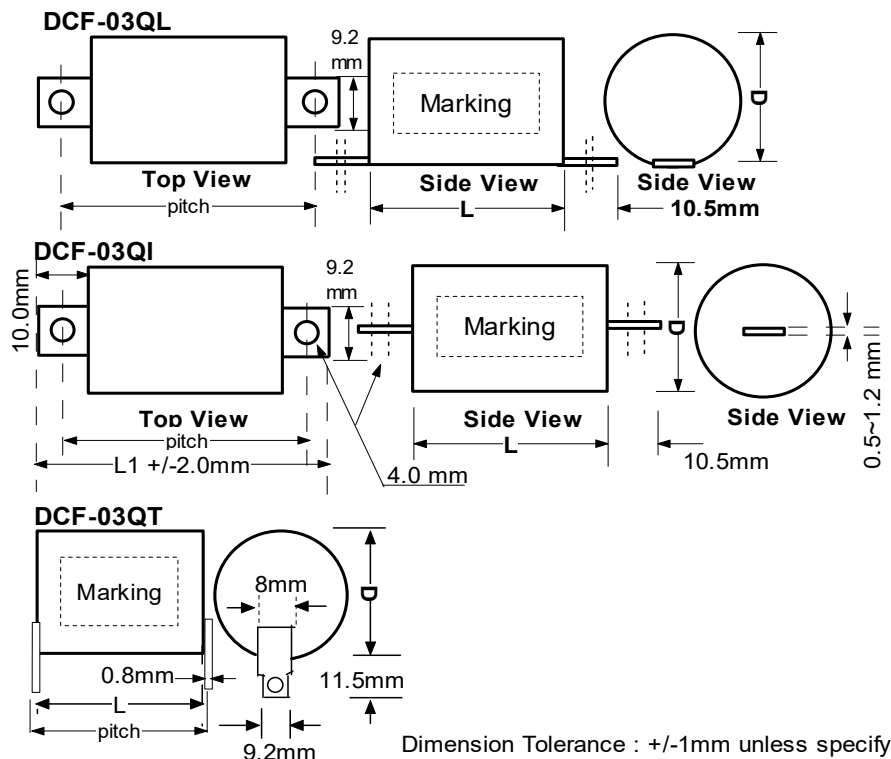
Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

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

Options :

Thermocouple can be built-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



For other Capacitance, Voltage, dv/dt, Peak Current and RMS Current not listed, please contact us for a suggestion.

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

Specifications and Size : 100Vdc / 75Vac

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. Amp							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

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. Amp							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

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. Amp							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, dv/dt, Peak Current and RMS Current not listed, please contact us for a suggestion.

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

Specifications and Size : 250Vdc / 160Vac

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Max. Amp 70C
1	11.5	22	43	2.4	99	99	5
1.5	10.5	34	55	4.9	55	82.5	7
2.2	11.5	34	55	3.3	55	121	9
2.5	12.5	34	55	3	55	138	9
3	14	34	55	2.6	55	165	9
5	17.5	34	55	1.9	55	275	9
6.8	20.5	34	55	1.6	55	374	9
10	20.5	45	66	1.9	33	330	9
15	25	45	66	1.4	33	495	13
20	28.5	45	66	1.3	33	660	13
25	32	45	66	1.3	33	825	13
30	30	58	79	2.3	22	660	13

Specifications and Size : 400Vdc / 250Vac

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Max. Amp 70C
0.68	10.5	34	55	6.7	77	53	6
1	12.5	34	55	4.6	77	77	8
1.5	15	34	55	3.2	77	116	9
2	17	34	55	2.6	77	154	10
2.2	18	34	55	2.5	77	169	10
2.5	19	34	55	2.3	77	193	10
3	20.5	34	55	2.1	77	231	10
4	20	45	66	2.7	55	220	10
4.7	21.5	45	66	2.4	55	259	11
5	22	45	66	2.3	55	275	11
6.8	25.5	45	66	1.9	55	374	13
10	30.5	45	66	1.6	55	550	13
15	32.5	58	77	2.8	33	495	13

Specifications and Size : 600Vdc / 330Vac

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Max. Amp 70C
1	16	34	55	3.8	110	110	10
2	19	45	66	3.7	83	166	10
2.2	20	45	66	3.5	83	183	10
3	23	45	66	2.8	83	249	10
4.7	28	45	66	2.1	83	390	13
5	29	45	66	2	83	415	13
6.8	29	58	79	4.1	55	374	13
8	42	30	51	3.3	80	640	15
10	35	58	79	3.2	55	550	13

Specifications and Size : 700Vdc / 400Vac

Cn uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Max. Amp 70C
0.68	17.5	34	55	4.1	138	94	10
1	21	34	55	3.1	138	138	11
1.5	21	45	66	3.8	99	149	11
2	24	45	66	3	99	198	13
2.2	25	45	66	2.8	99	218	13
3	29	45	66	2.3	99	297	13
4	33.5	45	66	2	99	396	13
4.7	30	58	79	4.7	66	310	13
5	31	58	79	4.4	66	330	13

For other Capacitance, Voltage, dv/dt, Peak Current and RMS Current not listed, please contact us for a suggestion.