

### 1.3.1 Medium Power Film Capacitors – DLFF series

#### Applications :

- Automotive, Wind Power, Solar Power and Industrial application
- Converter and Inverter circuit
- DC Link circuit and application
- Smoothing and Filter circuit
- can be a better replacement for electrolytic capacitor
- AC / DC application

#### Properties and comparison with Electrolytic Capacitor :

- Use segmented self-healing metallized polypropylene film
- Lower ESR and ESL
- Lower dielectric and resistive loss
- high Capacitance volume ratio
- higher r.m.s. current per capacitance
- support higher voltage range
- longer application life
- Non polar dielectric
- Dry construction
- Don't have electrolyte leakage problem
- can deliver higher ripple RMS current per capacitance



#### Electrical Characteristics :

**Rated Voltage :** 600Vdc - 1400Vdc

**Capacitance range :** 50uF - 1100uF

**Test Voltage :**

Terminal to Terminal : 1.5 x rated voltage for 10 seconds at +85C / +105C

Terminal to Case : 450Vac 60 seconds at +85C / +105C

**Operate Temperature :** -25C to +85C / -40C to +105C

**Reference Standard :** IEC 61071

**Life Expectancy :** 100,000 hours at rated Vdc at +85C / +105C

30,000 hours at rated Vac at +85C / +105C

**Accelerated Life :** 1.25 x Vac 5,000 hours at +85C / +105C

**Insulation Resistance :** 250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

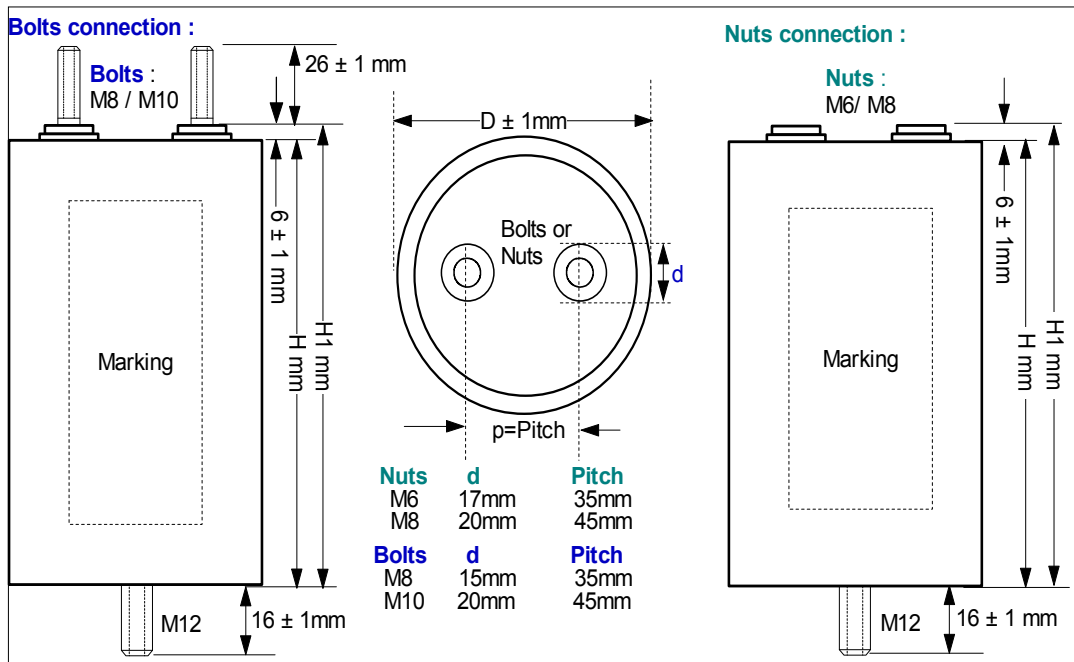
250Vdc +105C >= 5,000Mohm

#### 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

#### Drawing :



Other voltage, Capacitance, Irms and configurations can be provided. Please contact us for details.

**DLFF series****Specifications and Size : 600Vdc / 250Vac at 85C**

Capacitance $\mu$ F	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
220	600	11	2420	44	37	31	22	75	115	121
250	600	11	2750	50	42	36	25	75	115	121
300	600	11	3300	60	51	43	30	90	115	121
400	600	9	3600	56	47	40	28	90	140	146
450	600	9	4050	63	53	45	32	90	140	146
500	600	8	4000	55	46	39	27	90	160	166
550	600	8	4400	61	51	44	30	90	160	166
600	600	10	6000	78	66	56	39	90	195	201
700	600	8	5600	64	54	46	32	90	250	256
800	600	8	6400	73	62	52	36	90	250	256
900	600	8	7200	82	69	59	41	90	250	256
1000	600	7	7000	72	61	52	36	90	295	301
1100	600	7	7700	80	68	57	40	90	295	301

**Specifications and Size : 800Vdc / 300Vac at 85C**

Capacitance $\mu$ F	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
150	800	15	2250	37	32	27	19	75	115	121
200	800	11	2200	35	30	25	17	75	140	146
200	800	15	3000	50	42	36	25	90	115	121
250	800	9	2250	35	29	25	17	75	160	166
250	800	11	2750	46	39	33	23	90	140	146
270	800	11	2970	37	31	27	19	75	160	166
300	800	9	2700	42	35	30	21	90	160	166
350	800	9	3150	49	41	35	24	90	160	166
400	800	13	5200	65	55	47	32	90	195	201
450	800	10	4500	52	44	37	26	90	250	256
500	800	10	5000	44	37	31	22	90	250	256
550	800	10	5500	63	53	45	31	90	250	256
600	800	8	4800	55	46	39	27	90	295	301
700	800	8	5600	64	54	46	32	90	295	301

**DLFF series****Specifications and Size : 1000Vdc / 370Vac at 85C**

Capacitance $\mu$ F	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
120	1000	17	2040	36	30	26	18	90	115	121
150	1000	17	2550	45	38	32	22	90	115	121
180	1000	12.5	2250	38	32	27	19	90	140	146
220	1000	11	2420	37	31	26	18	90	160	166
250	1000	15	3750	63	53	45	31	90	195	201
300	1000	11	3300	43	36	31	21	90	250	256
350	1000	11	3850	50	42	36	25	90	250	256
400	1000	10	4000	44	37	31	22	90	295	301
450	1000	10	4500	49	41	35	24	90	295	301

**Specifications and Size : 1200Vdc / 420Vac at 85C**

Capacitance $\mu$ F	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
70	1200	20	1400	25	21	18	12	75	115	121
100	1200	20	2000	35	29	25	17	90	115	121
150	1200	14.5	2175	37	31	26	18	90	140	146
170	1200	12	2040	33	28	23	16	90	160	166
200	1200	18	3600	46	39	33	23	90	195	201
220	1200	18	3960	35	29	25	17	90	195	201
250	1200	13	3250	40	34	28	20	90	250	256
300	1200	13	3900	48	40	34	24	90	250	256
320	1200	11	3500	42	35	30	21	90	295	301
350	1200	11	3850	44	37	31	22	90	295	301

**Specifications and Size : 1400Vdc / 500Vac at 85C**

Capacitance $\mu$ F	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
50	1400	23	1150	20	17	14	10	75	115	121
70	1400	23	1610	28	23	20	14	90	115	121
100	1400	17	1700	28	23	20	14	90	140	146
120	1400	14.5	1740	27	23	19	13	90	160	166
130	1400	14.5	1885	29	24	21	14	90	160	166
150	1400	23	3450	39	33	28	19	90	195	201
200	1400	17	3400	36	31	26	18	90	250	256
230	1400	14.5	3335	34	28	24	17	90	295	301
250	1400	14.5	3625	36	30	26	18	90	295	301
270	1400	14.5	3915	39	33	28	19	90	295	301

**DLFF series****Specifications and Size : 600Vdc / 250Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
150	600	14	2100	46	41	35	29	24	11	90	115	121
200	600	14	2800	62	55	47	40	32	16	90	115	121
250	600	11	2750	55	49	42	35	28	14	90	140	146
270	600	11	2970	59	53	45	38	30	15	90	140	146
300	600	11	3300	63	56	48	41	32	16	90	140	146
350	600	13	3850	70	63	53	46	36	18	90	195	201
400	600	13	5200	80	72	61	52	41	21	90	195	201
450	600	10	4500	64	57	49	41	33	16	90	250	256
500	600	10	5000	70	63	53	46	36	18	90	250	256
550	600	10	5500	77	69	59	50	40	21	90	250	256
600	600	10	6000	85	76	65	55	44	22	90	250	256

**Specifications and Size : 800Vdc / 300Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
120	800	17	2040	44	39	34	28	22	11	90	115	121
150	800	17	2550	54	48	41	35	28	14	90	115	121
180	800	12.5	2250	45	40	34	29	23	11	90	140	146
220	800	15	3300	58	53	45	38	30	15	90	195	201
250	800	15	2750	67	60	51	44	35	17	90	195	201
300	800	11	3300	57	51	43	37	29	14	90	250	256
350	800	11	3850	66	59	50	43	34	17	90	250	256
400	800	9	3600	56	50	43	36	29	14	90	295	301
450	800	9	4050	63	56	48	41	32	16	90	295	301

**Specifications and Size : 1000Vdc / 350Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
60	1000	31	1860	42	37	32	27	21	10	90	90	96
70	1000	31	2170	49	44	37	31	25	12	90	90	96
100	1000	20	2000	42	37	32	27	21	10	90	115	121
170	1000	18	3060	53	53	45	38	30	15	90	195	201
200	1000	18	3600	63	56	48	41	32	16	90	195	201
220	1000	13	2860	48	43	37	31	25	12	90	250	256
250	1000	13	3250	56	50	43	36	29	14	90	250	256
300	1000	11	3300	48	43	37	31	25	12	90	295	301
320	1000	11	3520	52	46	39	33	27	13	90	295	301

**DLFF series****Specifications and Size : 1200Vdc / 400Vac at 105C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
50	1200	35	1750	38	34	29	24	19	10	90	90	96
70	1200	23	1610	32	29	24	21	16	8	90	115	121
100	1200	17	1700	33	29	25	21	17	8	90	140	146
130	1200	21	2730	45	40	34	29	23	11	90	195	201
150	1200	21	3150	51	46	39	33	27	13	90	195	201
200	1200	15	3000	50	45	38	32	26	13	90	250	256
225	1200	13	2925	41	36	31	26	21	10	90	295	301
230	1200	13	2990	42	37	32	27	21	10	90	295	301
250	1200	13	3250	45	40	34	29	23	11	90	295	301
270	1200	13	3510	49	44	37	31	25	12	90	295	301