

CAPACITORS POLYESTER

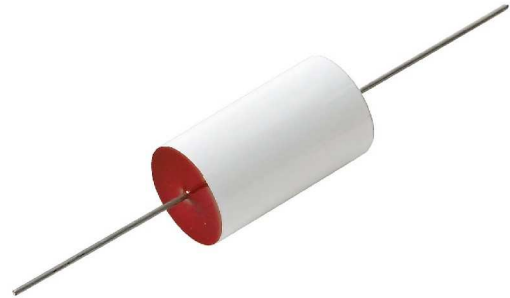
Type KT ... d

Applications

- AC or DC voltages
- High Impulse
- High Current
- Protection / excellent du/dt
- Coupling / decoupling, audio

Characteristics

- Dry plastic film technology
- Nominal Voltage: 63 VDC to 1000 VDC
- Climatic Category: 55/100/21
- Tolerances $\pm 10\%$
on request: $\pm 5\%$, $\pm 2\%$



KT...d

Design

- Polyester Film /Alumium/Tin Foil
- Polyester tape wrap UL-V0
- Tinned copper wire axial leads
- Epoxy resin end-seal (UL-V0)

Mounting

- Indifferent positioning

1.0 Rated Values and Operational Data

DC [VDC]	Nominal Voltage U_N	$\leq 85^\circ\text{C}$	63			250	400		1000
	Category Voltage U_C	$\leq 100^\circ\text{C}$	50			200	320		800
	Test Voltage U_T	2s, 23°C	130			500	800		2000
	Peak Voltage \hat{U}	Onde 1.2/50 70°C	400			800	1200		2000
AC [VAC]	Nominal Voltage U_N -	$\leq 85^\circ\text{C}$ 50/60 Hz	40			125	160		300
	Category Voltage U_C	$\leq 100^\circ\text{C}$ 50/60 Hz	32			100	130		240
	Maximum transitory Voltage U_{max}	$\leq 85^\circ\text{C}$	48			150	200		360

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch

CAPACITORS POLYESTER

Type KT ... d

2.0 Capacitance Range

Cn =>	470 pF		1.5 nF						1.0 µF		
63 VDC											
250 VDC											
400 VDC											
1000 VDC											

3.0 Characteristics

			Min	Typ	Max
Dissipation Factor	tg δ	50Hz, U _{N AC} C ≤ 0.33 µF, 1 kHz, 0.95xU _{N DC} C > 0.33 µF, 1 kHz, 0.95xU _{N DC}		25 45 60	35 x 10 ⁻⁴ 70 x 10 ⁻⁴ 90 x 10 ⁻⁴
		C ≤ 0.33 µF, 10 kHz, 0.95xU _{N DC} C > 0.33 µF, 10 kHz, 0.95xU _{N DC}		8.5 10	13 x 10 ⁻³ 15 x 10 ⁻³
Insulation resistance 1min, 23°C C	R _i [MOhms]	C ≤ 0.33 µF, 500 V	1 x 10 ⁵	5 x 10 ⁵	
Time Constant 1 min, 23°C	R _i C [s]	C > 033 µF, 500 V	50000	70000	
Temperature coefficient	α _c	0 ... + 80°C [ppm / °C]		500 ^{±125}	

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch

CAPACITORS POLYESTER

Type KT ... d

4.0 Usage Limits

4.1 Limits of standard current

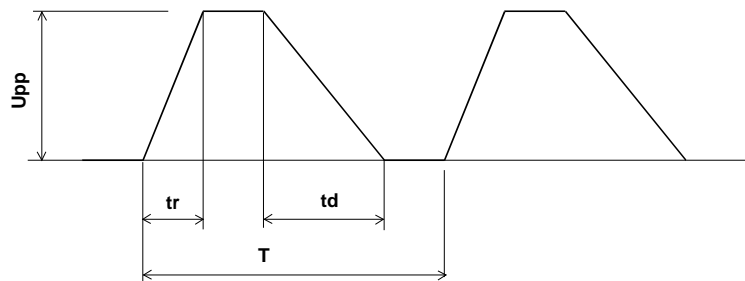
The upper limit of the standard current is determined by the following:

$$I_{rms} = \sqrt{\frac{1}{T} \int_0^T i^2(t) dt} \quad \text{at } I_{rms} \leq I_{eff \max}(f)$$

With $I_{eff \max}(f) = I_{eff \max}(10\text{kHz}) \times \left(1 + \frac{f-10}{50}\right)$ for $10 \text{ kHz} \leq f \leq 30 \text{ kHz}$

and $I_{eff \max}(f) = 1.4 \times I_{eff \max}(10\text{kHz})$ for $f > 30\text{kHz}$

4.2 Impulse Usage



where t_r , t_d respectively, the charge and discharge times, and T indicates cycle time

with $\left(\frac{du}{dt}\right)_N$ defining U_N et $T_{amb} \leq 70^\circ\text{C}$ (see data sheets)

Peak current is limited to $\hat{I}_{cr} [A] = C_N [\mu F] \times \left(\frac{du}{dt}\right)_N$

and

the maximum rise in voltage variation $\left(\frac{du}{dt}\right)_{\max} = \frac{U_N}{U_{pp}} \times \left(\frac{du}{dt}\right)_N$

CAPACITORS POLYESTER

Type KT ... d

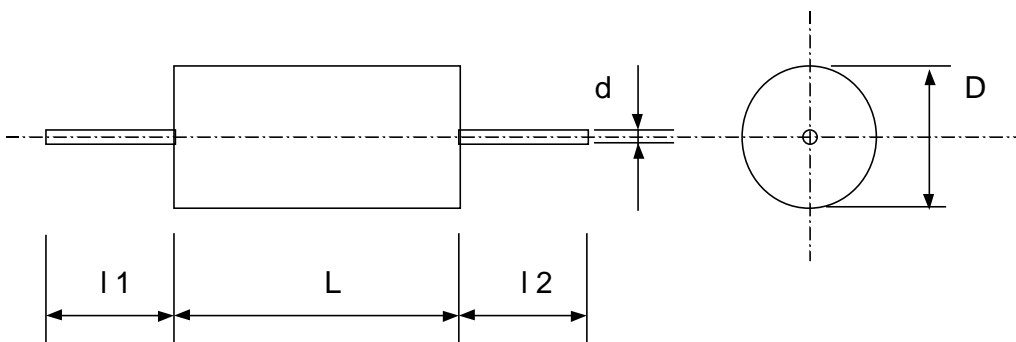
Maximum recurrence of frequency is determined by:

$$fp \text{ max [p.p.s]} = \frac{1}{T} = \frac{I^2_{eff \text{ max}}(f)}{I_{1cr}^2 \times t_r + I_{2cr}^2 \times t_s} \text{ with } \hat{I}_{cr1} [A] = C_N [\mu F] \times \frac{U_{pp}}{t_r}$$

and $\hat{I}_{cr2} [A] = C_N [\mu F] \times \frac{U_{pp}}{td}$

given that $\frac{U_{pp}}{t_r}; \frac{U_{pp}}{td} \leq \left(\frac{du}{dt}\right)_{\text{max}}$

5.0 Dimensions, shape:



∅D [mm]	≤ 8	8 .. 10.5	> 10.5
∅ d [mm]	0.6	0.8	1.0
l ₁ , l ₂	min 30 mm		

The capacitors are delivered in bulk.

On special request we can deliver tape-mounted.

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch

CAPACITORS POLYESTER

Type KT ... d

KT 63 VDC axial

B3bF2	Type	Cn	Dimensions			dU / dt max	\hat{i}	I _{rms}
			Pos.	[nF]	∅ [mm]			
1	KT 6-215 d	1.5	5.0	11.0	0.6	1'300	2.0	0.03
2	KT 6-222 d	2.2	5.5	11.0	0.6	1'300	2.9	0.03
3	KT 6-233 d	3.3	6.0	11.0	0.6	1'300	4.3	0.04
4	KT 6-247 d	4.7	7.0	11.0	0.6	1'300	6.1	0.05
5	KT 6-268 d	6.8	6.5	15.0	0.6	1'000	6.8	0.06
6	KT 6-110 d	10	7.5	15.0	0.6	1'000	10.0	0.08
7	KT 6-115 d	15	6.5	22.0	0.6	530	8.0	0.11
8	KT 6-122 d	22	7.5	22.0	0.6	530	11.7	0.14
9	KT 6-133 d	33	9.0	22.0	0.8	530	17.5	0.19
10	KT 6-147 d	47	10.0	22.0	0.8	530	24.9	0.24
11	KT 6-168 d	68	10.0	27.0	0.8	400	27.2	0.32
12	KT 6-010 d	100	11.0	27.0	1.0	400	40.0	0.40
13	KT 6-015 d	150	13.0	27.0	1.0	400	60.0	0.54
14	KT 6-022 d	220	14.0	33.0	1.0	320	70.4	0.74
15	KT 6-033 d	330	16.5	33.0	1.0	320	105.6	1.00
16	KT 6-047 d	470	16.5	44.0	1.0	220	103.4	1.35
17	KT 6-068 d	680	19.0	44.0	1.0	220	149.6	1.76
18	KT 6-1.0 d	1000	23.0	44.0	1.0	220	220.0	2.39

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch

CAPACITORS POLYESTER

Type KT ... d

KT 250 VDC axial

B3bF2	Type	Cn [nF]	Dimensions			dU / dt max [V / μ s]	\hat{i} [A]	I _{rms} [A]
			\varnothing [mm]	L [mm]	\varnothing fil [mm]			
1	KT 25-347 d	0.47	4.5	11.0	0.6	1'200	0.6	0.02
2	KT 25-368 d	0.68	4.5	11.0	0.6	1'200	0.8	0.02
3	KT 25-210 d	1.0	5.0	11.0	0.6	1'200	1.2	0.02
4	KT 25-215 d	1.5	5.5	11.0	0.6	1'200	1.8	0.03
5	KT 25-222 d	2.2	5.5	15.0	0.6	1'200	2.6	0.04
6	KT 25-233 d	3.3	6.0	15.0	0.6	1'200	4.0	0.04
7	KT 25-247 d	4.7	6.5	15.0	0.6	1'200	5.6	0.05
8	KT 25-268 d	6.8	6.0	22.0	0.6	700	4.8	0.07
9	KT 25-110 d	10	6.5	22.0	0.6	700	7.0	0.09
10	KT 25-115 d	15	7.5	22.0	0.6	700	10.5	0.12
11	KT 25-122 d	22	8.5	22.0	0.8	700	15.4	0.15
12	KT 25-133 d	33	10.5	22.0	0.8	700	23.1	0.21
13	KT 25-147 d	47	12.5	22.0	1.0	700	32.9	0.28
14	KT 25-168 d	68	12.0	27.0	1.0	520	35.4	0.35
15	KT 25-010 d	100	14.0	27.0	1.0	520	52.0	0.46
16	KT 25-015 d	150	15.0	33.0	1.0	420	63.0	0.64
17	KT 25-022 d	220	17.0	33.0	1.0	420	92.4	0.84
18	KT 25-033 d	330	17.0	44.0	1.0	300	99.0	1.15
19	KT 25-047 d	470	19.5	44.0	1.0	300	141.0	1.48
20	KT 25-068 d	680	23.5	44.0	1.0	300	204.0	1.99
21	KT 25-1.0 d	1000	28.5	44.0	1.0	300	300.0	2.72

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch

CAPACITORS POLYESTER

Type KT ... d

KT 400 VDC axial

B3bF2	Type	Cn [nF]	Dimensions			dU / dt max [V / μ s]	\hat{i} [A]	I _{rms} [A]
			\varnothing [mm]	L [mm]	\varnothing fil [mm]			
1	KT 40-347 d	0.47	5.5	15.0	0.6	1'200	0.6	0.02
2	KT 40-368 d	0.68	6.0	15.0	0.6	1'200	0.8	0.02
3	KT 40-210 d	1.0	6.0	22.0	0.6	1'000	1.0	0.03
4	KT 40-215 d	1.5	6.0	22.0	0.6	1'000	1.5	0.04
5	KT 40-222 d	2.2	6.5	22.0	0.6	1'000	2.2	0.05
6	KT 40-233 d	3.3	6.5	22.0	0.6	1'000	3.3	0.05
7	KT 40-247 d	4.7	7.0	22.0	0.6	1'000	4.7	0.07
8	KT 40-268 d	6.8	7.5	22.0	0.6	1'000	6.8	0.08
9	KT 40-110 d	10	8.5	22.0	0.8	1'000	10.0	0.10
10	KT 40-115 d	15	8.5	22.0	0.8	1'000	15.0	0.13
11	KT 40-122 d	22	9.5	22.0	0.8	1'000	22.0	0.16
12	KT 40-133 d	33	9.5	27.0	0.8	820	27.1	0.22
13	KT 40-147 d	47	11.5	27.0	1.0	820	38.5	0.29
14	KT 40-168 d	68	13.0	27.0	1.0	820	55.8	0.37
15	KT 40-010 d	100	15.5	27.0	1.0	820	82.0	0.49
16	KT 40-015 d	150	17.0	33.0	1.0	660	99.0	0.69
17	KT 40-022 d	220	16.5	44.0	1.0	500	110.0	0.92
18	KT 40-033 d	330	19.0	44.0	1.0	500	165.0	1.23
19	KT 40-047 d	470	22.0	44.0	1.0	500	235.0	1.59
20	KT 40-068 d	680	27.0	44.0	1.0	500	340.0	2.17
21	KT 40-1.0 d	1000	32.0	44.0	1.0	500	500.0	2.93

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch

CAPACITORS POLYESTER

Type KT ... d

KT 1000 VDC axial

B3bF2	Type	Cn	Dimensions			dU / dt max	î	I _{rms}
			Pos.	[nF]	ø [mm]			
1	KT 100-347 d	0.47	6.0	22.0	0.6	1'800	0.8	0.02
2	KT 100-368 d	0.68	7.0	22.0	0.6	1'800	1.2	0.03
3	KT 100-210 d	1.0	7.0	22.0	0.6	1'800	1.8	0.03
4	KT 100-215 d	1.5	7.0	22.0	0.6	1'800	2.7	0.04
5	KT 100-222 d	2.2	7.5	22.0	0.6	1'800	4.0	0.05
6	KT 100-233 d	3.3	9.0	22.0	0.8	1'800	5.9	0.06
7	KT 100-247 d	4.7	10.5	22.0	0.8	1'800	8.5	0.08
8	KT 100-268 d	6.8	12.5	22.0	1.0	1'800	12.2	0.11
9	KT 100-110 d	10	11.0	27.0	1.0	1'450	14.5	0.13
10	KT 100-115 d	15	13.5	27.0	1.0	1'450	21.8	0.18
11	KT 100-122 d	22	13.5	33.0	1.0	1'200	26.4	0.23
12	KT 100-133 d	33	16.0	33.0	1.0	1'200	39.6	0.32
13	KT 100-147 d	47	15.0	44.0	1.0	900	42.3	0.41
14	KT 100-168 d	68	18.0	44.0	1.0	900	61.2	0.54
15	KT 100-010 d	100	21.0	44.0	1.0	900	90.0	0.72
16	KT 100-015 d	150	25.0	44.0	1.0	900	135.0	0.98
17	KT 100-022 d	220	30.0	44.0	1.0	900	198.0	1.32
18	KT 100-033 d	330	36.0	44.0	1.0	900	297.0	1.81
19	KT 100-047 d	470	42.0	44.0	1.0	900	423.0	2.39
20	KT 100-068 d	680	40.0	64.0	1.0	500	340.0	3.19
21	KT 100-1.0 d	1000	47.0	64.0	1.0	500	500.0	4.28

Leclanché Capacitors for Critical Applications and Extreme Environments.

1400 Yverdon, Switzerland. Tel. +41 24 445 66 88 - Fax +41 24 445 66 89 capinfo@Lcap.ch www.Lcap.ch