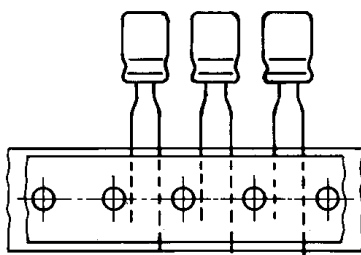
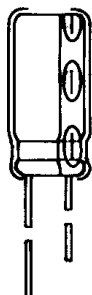


Aluminum Electrolytic Capacitors, Radial Style



FEATURES

- Polarized Al electrolytic capacitor
- Extremely long lifetime
- High temperature range up to 125°C
- Low impedance and R_{ESR} values
- High AC rating

APPLICATIONS

- Industrial electronics, automotive electronics, data processing electronics, telecommunication systems
- Smoothing, filtering

MAIN SPECIFICATIONS		
Nominal Case Size (D x L)	[mm]	8.5 x 11 to 16 x 31.5
Rated Capacitance Range	[μ F]	0.47 to 470
Capacitance Tolerance	[%]	± 20
Rated Voltage Range	[V]	10 to 100
Category Temperature Range	[°C]	-40 to 125
Endurance Test at Upper Category Temperature	[h]	1000
Lifetime at 125°C and I_R	[h]	1500
Lifetime at 85°C and I_R	[h]	24000
Lifetime at 40°C and I_R	[h]	500.000
Sectional Specifications		IEC 384-4, CECC 30300, GP grade
Climatic category IEC 68 DIN 40040		40 / 125 / 56 GKF
Failure rate	[10 ⁻⁹ /h]	≤ 5

DIMENSIONS							
Nominal Size (D x L)							
CAP. [μF]	RATED VOLTAGE [V]						
	10	16	25	35	50	63	100
0.47					8 x 11.5	8 x 11.5	8 x 11.5
1.0					8 x 11.5	8 x 11.5	8 x 11.5
2.2					8 x 11.5	8 x 11.5	10 x 12.5
3.3					8 x 11.5	8 x 11.5	10 x 16
4.7					8 x 11.5	8 x 11.5	10 x 16
10				8 x 11.5	8 x 11.5	8 x 11.5	10 x 20
22			8 x 11.5	8 x 11.5	10 x 12.5	10 x 16	13 x 25
33		8 x 11.5	8 x 11.5	10 x 12.5	10 x 16	10 x 20	16 x 25
47	8 x 11.5	8 x 11.5	10 x 12.5	10 x 16	10 x 20	13 x 20	16 x 31.5
100	10 x 12.5	10 x 16	10 x 20	13 x 20	13 x 25	13 x 25	
220	10 x 20	13 x 20	13 x 25	16 x 25			
330	13 x 20	13 x 25	16 x 25				
470	13 x 25	16 x 25					

•10% capacitance tolerance on request

LEAKAGE CURRENT

Formula for the calculation of the maximum leakage current for acceptance tests I_L :

(Test conditions: C_R , 20°C, 2 minutes)

$$I_{L2} [\mu A] \leq 0.002 \cdot C_R [\mu F] \cdot U_R [V] \quad \text{or} \quad 0.4 \mu A \quad (\text{whichever is greater})$$

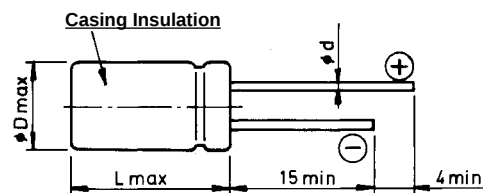
LOW TEMPERATURE BEHAVIOR		
Impedance ratio $Z(T_2) / Z(T_1)$ at 120Hz		
T_2 / T_1	RATED VOLTAGE [V]	
	10	16 - 100
-25°C / +20°C	3	2
-25°C / +20°C	5	4

DIMENSIONS AND LEAD CONFIGURATION

 $8 \leq \varnothing D \leq 16$

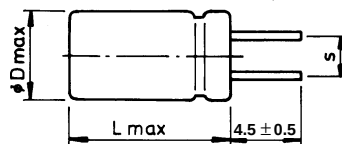
Long leads

EKL 00...


 $8 \leq \varnothing D \leq 16$

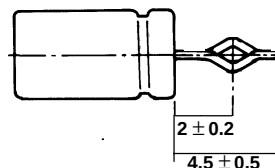
Shortened leads
(S = 3.5 / 5 / 7.5mm)

EKL 05...


 $10 \leq \varnothing D \leq 16$

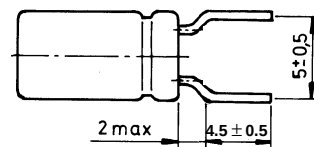
Leads shortened and formed
(S = 5 / 7.5mm)

EKL 06...


 $\varnothing D \leq 8$

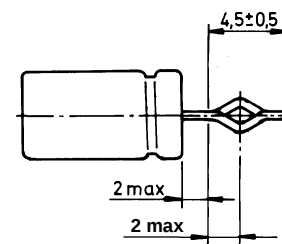
Leads bent open, shortened
(S = 5mm)

EKL 09...


 $\varnothing D \leq 8$

Leads bent open,
shortened and formed
(S = 2.5 / 5mm)

EKL 06...



DIMENSIONS [in millimeters]

NOMINAL SIZE D X L	MAXIMUM SIZE D _{max.} X L _{max.}	LEAD ød ± 0.05	LEAD SPACING S ± 0.05
8 x 11.5	8.5 x 12.5	0.6	3.5
10 x 12.5	10.5 x 14.5	0.6	5.0
10 x 16	10.5 x 18.0	0.6	5.0
10 x 20	10.5 x 22.0	0.6	5.0
13 x 20	13.5 x 22.0	0.6	5.0
13 x 25	13.5 x 27.0	0.6	5.0
16 x 25	16.5 x 27.0	0.8	7.5
16 x 31.5	16.5 x 33.5	0.8	7.5

TECHNICAL AND ORDERING INFORMATION

If not indicated otherwise the following test

conditions apply to all electrical parameters:

$T_a = 20^\circ\text{C}$, $p = 80\text{--}120\text{ kPa}$, $RH = 45\text{--}75\%$

C_R Rated capacitance at 120Hz

U_R Rated voltage

$\tan \delta$ Max. dissipation factor at 120Hz

R_{ESR} Max. equivalent series resistance at 120Hz

I_R Rated alternating current at 120Hz and
upper category temperature

Ordering example:

EKL 100 μF / 35V, $\pm 20\%$, Size: 13mm x 20mm

Leads: long

Ordering code: EKL00GE310F00

Leads: short (4.5 ± 0.5)

Ordering code: EKL 05...

Leads: bent open, shortened

Ordering code: EKL 09...

Leads: bent open, shortened and formed

Ordering code: EKL 06...

ELECTRICAL CHARACTERISTICS, WEIGHT AND ORDERING CODE							
CAP. 120Hz C_R [μF]	RATED VOLTAGE U_R [V]	DIMENSIONS $D \times L$ [mm]	DISSIPATION FACTOR 120Hz	EQUIVALENT SERIES RESISTANCE 120 Hz [Ω]	RATED CURRENT I_R 120Hz, 125°C [mA]	WEIGHT [g]	ORDERING CODE
47	10	8.0 x 11.5	0.15	4.24	95	1.1	EKL00PB247C00
100	10	10.0 x 16.0	0.15	2.00	160	2.0	EKL00DD310C00
220	10	13.0 x 20.0	0.15	0.91	284	3.8	EKL00GE322C00
330	10	13.0 x 20.0	0.15	0.61	408	3.8	EKL00GE333C00
470	10	13.0 x 25.0	0.15	0.43	532	4.5	EKL00GG347C00
33	16	8.0 x 11.5	0.12	4.83	89	1.1	EKL00PB233D00
47	16	8.0 x 11.5	0.12	3.39	106	1.1	EKL00PB247D00
100	16	10.0 x 16.0	0.12	1.60	196	2.0	EKL00DD310D00
220	16	13.0 x 20.0	0.12	0.73	373	3.8	EKL00GE322D00
330	16	13.0 x 25.0	0.12	0.49	498	4.5	EKL00GG333D00
470	16	16.0 x 25.0	0.12	0.34	659	7.0	EKL00JG347D00
22	25	8.0 x 11.5	0.10	6.04	79	1.1	EKL00PB222E00
33	25	8.0 x 11.5	0.10	4.03	97	1.1	EKL00PB233E00
47	25	10.0 x 12.5	0.10	2.83	135	1.5	EKL00DC247E00
100	25	10.0 x 20.0	0.10	1.33	235	2.5	EKL00DE310E00
220	25	13.0 x 25.0	0.10	0.61	445	4.5	EKL00GG322E00
330	25	16.0 x 25.0	0.10	0.41	605	7.0	EKL00JG333E00
10	35	8.0 x 11.5	0.10	13.27	53	1.1	EKL00PB210F00
22	35	8.0 x 11.5	0.10	6.04	79	1.1	EKL00PB222F00
33	35	10.0 x 12.5	0.10	4.03	113	1.5	EKL00DC233F00
47	35	10.0 x 16.0	0.10	2.83	147	2.0	EKL00DD247F00
100	35	13.0 x 20.0	0.10	1.33	275	3.8	EKL00GE310F00
220	35	16.0 x 25.0	0.10	0.61	494	7.0	EKL00JG322F00

ELECTRICAL CHARACTERISTICS, WEIGHT AND ORDERING CODE							
CAP. 120Hz CR [μF]	RATED VOLTAGE UR [V]	DIMENSIONS D x L [mm]	DISSIPATION FACTOR 120Hz	EQUIVALENT SERIES RESISTANCE 120 Hz [Ω]	RATED CURRENT IR 120Hz, 125°C [mA]	WEIGHT [g]	ORDERING CODE
0.47	50	8.0 x 11.5	0.08	226.0	13	1.1	EKL00PB047H00
1	50	8.0 x 11.5	0.08	107.0	19	1.1	EKL00PB110H00
2.2	50	8.0 x 11.5	0.08	48.26	28	1.1	EKL00PB122H00
3.3	50	8.0 x 11.5	0.08	32.17	34	1.1	EKL00PB133H00
4.7	50	8.0 x 11.5	0.08	22.60	41	1.1	EKL00PB147H00
10	50	8.0 x 11.5	0.08	10.62	60	1.1	EKL00PB210H00
22	50	10.0 x 12.5	0.08	4.83	103	1.5	EKL00DC222H00
33	50	10.0 x 16.0	0.08	3.22	138	2.0	EKL00DD233H00
47	50	10.0 x 20.0	0.08	2.26	180	2.5	EKL00DE247H00
100	50	13.0 x 25.0	0.08	1.07	336	4.5	EKL00GG310H00
0.47	63	8.0 x 11.5	0.08	226.0	13	1.1	EKL00PB047J00
1	63	8.0 x 11.5	0.08	107.0	19	1.1	EKL00PB110J00
2.2	63	8.0 x 11.5	0.08	48.26	28	1.1	EKL00PB122J00
3.3	63	8.0 x 11.5	0.08	32.17	34	1.1	EKL00PB133J00
4.7	63	8.0 x 11.5	0.08	22.60	41	1.1	EKL00PB147J00
10	63	8.0 x 11.5	0.08	10.62	60	1.1	EKL00PB210J00
22	63	10.0 x 16.0	0.08	4.83	113	2.0	EKL00DD222J00
33	63	10.0 x 20.0	0.08	3.22	151	2.5	EKL00DE233J00
47	63	13.0 x 20.0	0.08	2.26	211	2.8	EKL00GE247J00
100	63	13.0 x 25.0	0.08	1.07	336	4.5	EKL00GG310J00
0.47	100	8.0 x 11.5	0.08	226.0	13	1.1	EKL00PB047L00
1	100	8.0 x 11.5	0.08	107.0	19	1.1	EKL00PB110L00
2.2	100	10.0 X 12.5	0.08	48.26	33	1.5	EKL00DC122L00
3.3	100	10.0 X 16.0	0.08	32.17	44	2.0	EKL00DD133L00
4.7	100	10.0 X 16.0	0.08	22.60	52	2.0	EKL00DD147L00
10	100	10.0 X 20.0	0.08	10.62	83	2.5	EKL00DE210L00
22	100	13.0 x 25.0	0.08	4.83	157	4.5	EKL00GG222L00
33	100	16.0 x 25.0	0.08	3.22	214	7.0	EKL00JG233L00
47	100	16.0 x 31.5	0.08	2.26	279	9.0	EKL00JS247L00