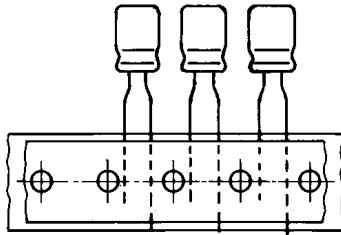
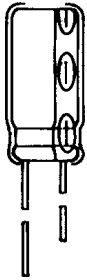


## Aluminum Electrolytic Capacitors, Radial Style



### FEATURES

- Polarized Al electrolytic capacitor
- High C·U product with miniature dimensions
- Little leakage current
- Low energy requirement
- Large temperature range: -55°C / 105°C

### APPLICATIONS

- Industrial electronics, automotive electronics, audio / video systems
- Coupling, decoupling, timing elements, storage
- Portable and mobile units

MAIN SPECIFICATIONS		
Nominal Case Size (D x L)	[mm]	5 x 11 to 10 x 12.5
Rated Capacitance Range	[μF]	0.1 to 330
Capacitance Tolerance	[%]	± 20
Rated Voltage Range	[V]	10 to 50
Category Temperature Range	[°C]	-55 to 105
Endurance Test at Upper Category Temperature	[h]	1000
Lifetime at 105°C and I <sub>R</sub>	[h]	1500
Lifetime at 85°C and I <sub>R</sub>	[h]	6000
Lifetime at 40°C and I <sub>R</sub>	[h]	140.000°C
Sectional Specifications		IEC 384-4, CECC 30300, GP grade
Climatic Category		
IEC 68		55 / 105 / 56
DIN 40040		FMF
Failure Rate	[10 <sup>-9</sup> /h]	≤ 45

<b>DIMENSIONS</b>					
Nominal size D x L [in millimeters]					
CAP. [μF]	RATED VOLTAGE [V]				
	10	16	25	35	50
0.1					5 x 11
0.15					5 x 11
0.22					5 x 11
0.33					5 x 11
0.47					5 x 11
0.68					5 x 11
1.0					5 x 11
1.5					5 x 11
2.2					5 x 11
3.3					5 x 11
4.7					5 x 11
6.8					5 x 11
10					5 x 11
15					6.3 x 11
22			5 x 11	6.3 x 11	6.3 x 11
33		5 x 11	6.3 x 11	6.3 x 11	8 x 11.5
47	5 x 11	6.3 x 11	6.3 x 11	8 x 11.5	8 x 11.5
100	6.3 x 11	8 x 11.5	8 x 11.5	10 x 12.5	
220	8 x 11.5	10 x 12.5			
330	10 x 12.5				

•10% capacitance tolerance on request

## LEAKAGE CURRENT

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

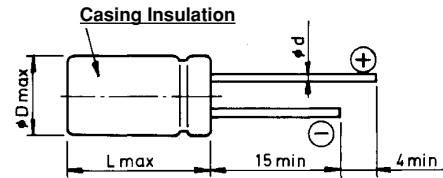
(Test conditions:  $C_R$ , 20°C, 2 minutes)

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

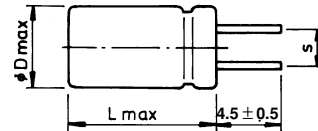
<b>LOW TEMPERATURE BEHAVIOR</b>					
Impedance ratio $Z(T_2) / Z(T_1)$ at 120Hz					
$T_2 / T_1$	RATED VOLTAGE [V]				
	10	16	25	35	50
-25°C / +20°C	2	2	1.5	1.5	1.5
-25°C / +20°C	4	3	2	2	2

**DIMENSIONS AND LEAD CONFIGURATION**

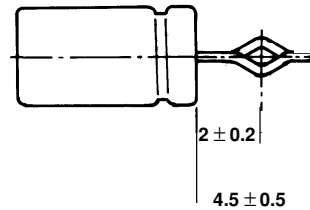
$5 \leq \text{ØD} \leq 10$     Long leads    EKI 00...



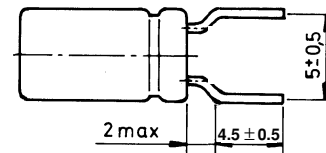
$5 \leq \text{ØD} \leq 10$     Shortened leads  
(S = 2 / 2.5 / 3.5 / 5mm)    EKI 05...



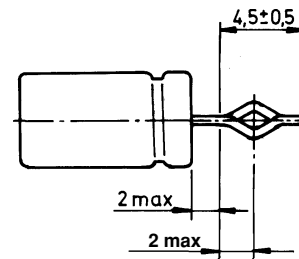
$\text{ØD} = 10$     Leads shortened and formed  
(S = 5mm)    EKI 06...



$5 \leq \text{ØD} \leq 8$     Leads bent open, shortened  
(S = 5mm)    EKI 09...



$5 \leq \text{ØD} \leq 8$     Leads bent open,  
shortened and formed  
(S = 5mm)    EKI 06...



Leads are solder-coated steel  
Safety vent for  $\text{ØD} \geq 8 \text{ mm}$

<b>DIMENSIONS</b> [in millimeters]			
NOMINAL SIZE D X L	MAXIMUM SIZE D <sub>max.</sub> X L <sub>max.</sub>	LEAD ød ± 0.05	LEAD SPACING S ± 0.05
5 x 11	5.5 x 12.0	0.5	2.0
6.3 x 11	6.8 x 12.0	0.5	2.5
8 x 11.5	8.5 x 12.5	0.6	3.5
10 x 12.5	10.5 x 14.0	0.6	5.0

**TECHNICAL AND ORDERING INFORMATION**

If not indicated otherwise the following test conditions apply to all electrical parameters:

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

$C_R$	Rated capacitance at 120Hz
$U_R$	Rated voltage
$\tan \delta$	Max. Dissipation Factor at 120Hz
$R_{\text{ESR}}$	Max. Equivalent Series Resistance at 120Hz
$I_{L2}$	Max. Leakage Current for acceptance test after 2 minutes at $U_R$
$I_R$	Rated Alternating Current at 120Hz and Upper Category Temperature

**Ordering example:**

EKI 220  $\mu\text{F}$  / 16V,  $\pm 20\%$ , Size: 10mm x 12.5mm

Leads: Long

Ordering code: EKI 00DC322D00

Leads: Short

Ordering code: EKI 05...

Leads: Bent open, shortened

Ordering code: EKI 09...

Leads: Bent open, shortened and formed

Ordering code: EKI 06...

**ELECTRICAL CHARACTERISTICS, WEIGHT AND ORDERING CODE**

CAP. 120Hz [ $\mu\text{F}$ ]	RATED VOLTAGE [V]	DIMENSIONS D x L [mm]	DISSIPATION FACTOR 120Hz	EQUIVALENT SERIES RESISTANCE 120Hz [ $\Omega$ ]	$I_{L2}$ 2 min [ $\mu\text{A}$ ]	RATED CURRENT 120Hz, 105 $^{\circ}\text{C}$ [mA]	WEIGHT [g]	ORDERING CODE
47	10	5.0 x 11.0	0.15	5.1	0.9	70	0.5	EKI00AA247C00
100	10	6.3 x 11.0	0.15	2.4	2.0	117	0.8	EKI00BA310C00
220	10	8.0 x 11.5	0.15	1.1	4.4	205	1.1	EKI00PB322C00
330	10	10.0 x 12.5	0.15	0.7	6.6	291	1.5	EKI00DC333C00
33	16	5.0 x 11.0	0.12	5.8	1.1	65	0.5	EKI00AA233D00
47	16	6.3 x 11.0	0.12	4.1	1.5	90	0.8	EKI00BA247D00
100	16	8.0 x 11.5	0.12	1.9	3.2	154	1.1	EKI00PB310D00
220	16	10.0 x 12.5	0.12	0.9	7.0	266	1.5	EKI00DC322D00
22	25	5.0 x 11.0	0.08	5.8	1.1	65	0.5	EKI00AA222E00
33	25	6.3 x 11.0	0.08	3.9	1.7	92	0.8	EKI00BA233E00
47	25	6.3 x 11.0	0.08	2.7	2.4	110	0.8	EKI00BA247E00
100	25	8.0 x 11.5	0.08	1.3	5.0	189	1.1	EKI00PB310E00
22	35	6.3 x 11.0	0.08	5.8	1.5	75	0.8	EKI00BA222F00
33	35	6.3 x 11.0	0.08	3.9	2.3	92	0.8	EKI00BA233F00
47	35	8.0 x 11.5	0.08	2.7	3.3	129	1.1	EKI00PB247F00
100	35	10.0 x 12.5	0.08	1.3	7.0	219	1.5	EKI00DC310F00
0.1	50	5.0 x 11.0	0.08	1273	0.4	4	0.5	EKI00AA010H00
0.15	50	5.0 x 11.0	0.08	849	0.4	5	0.5	EKI00AA015H00
0.22	50	5.0 x 11.0	0.08	579	0.4	7	0.5	EKI00AA022H00
0.33	50	5.0 x 11.0	0.08	386	0.4	9	0.5	EKI00AA033H00
0.47	50	5.0 x 11.0	0.08	271	0.4	10	0.5	EKI00AA047H00
0.68	50	5.0 x 11.0	0.08	187	0.4	11	0.5	EKI00AA068H00
1	50	5.0 x 11.0	0.08	127	0.4	14	0.5	EKI00AA110H00
1.5	50	5.0 x 11.0	0.08	85	0.4	17	0.5	EKI00AA115H00
2.2	50	5.0 x 11.0	0.08	58	0.4	21	0.5	EKI00AA122H00
3.3	50	5.0 x 11.0	0.08	38	0.4	25	0.5	EKI00AA133H00
4.7	50	5.0 x 11.0	0.08	27	0.5	30	0.5	EKI00AA147H00
6.8	50	5.0 x 11.0	0.08	16	0.7	36	0.5	EKI00AA168H00
10	50	5.0 x 11.0	0.08	13	1.0	44	0.5	EKI00AA210H00
15	50	6.3 x 11.0	0.08	7.5	1.2	62	0.8	EKI00BA215H00
22	50	6.3 x 11.0	0.08	5.8	2.2	75	0.8	EKI00BA222H00
33	50	8.0 x 11.5	0.08	3.9	3.3	109	1.1	EKI00PB233H00
47	50	8.0 x 11.5	0.08	2.7	4.7	129	1.1	EKI00PB247H00

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Datasheets for electronics components.