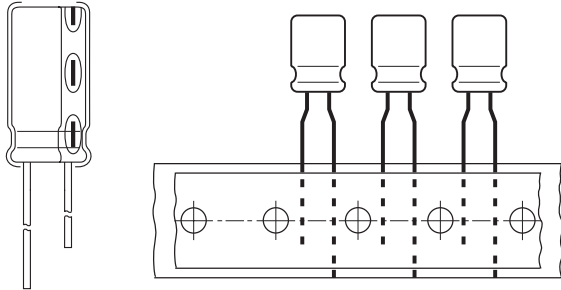


Aluminum Capacitors Radial Style



Component outlines.

FEATURES

- Polarized aluminum electrolytic capacitor
- High ripple current
- High reliability
- High useful life > 10000 h / 105 °C


**RoHS
COMPLIANT**
APPLICATIONS

- For electronic lighting ballast

QUICK REFERENCE DATA

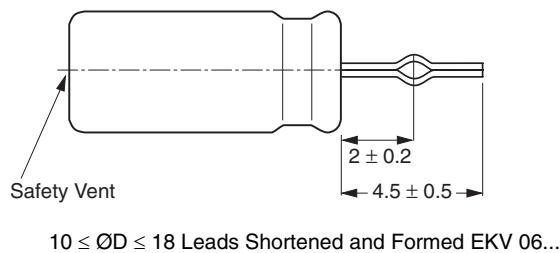
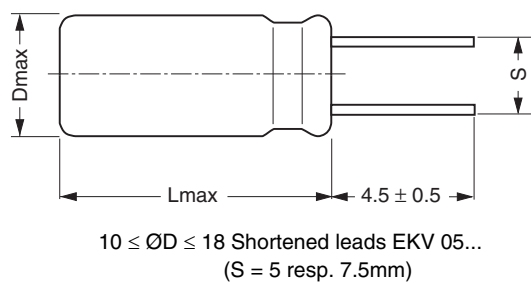
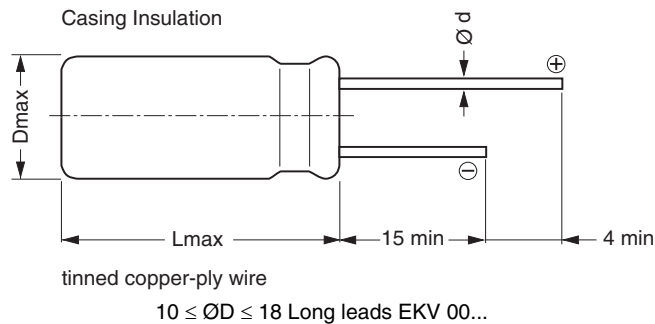
DESCRIPTION	UNIT	VALUE
Nominal case size ($\varnothing D \times L$)	mm	10 × 16 to 18 × 31.5
Rated capacitance range C_R	μF	6.8 to 150
Capacitance tolerance	%	± 20
Rated voltage range	V	160 to 450
Category temperature range	°C	- 25 to 105
Endurance test at upper category temperature	h	10000 \varnothing 10: 8000
Useful life at 105 °C and I_R applied	h	12000 \varnothing 10: 10000
Useful life at 85 °C and I_R applied	h	> 80000
Shelf Life (0 V, 105 °C)	h	1 000
Failure rate	$10^{-9}/h$	≤ 5
Based on sectional specification		IEC 60384-4/EN130300
Climatic category IEC 60 068		25/105/56

SELECTION CHART FOR C_R , U_R AND RELEVANT NOMINAL CASE SIZES ($\varnothing D \times L$ in mm)

C_R (μF)	U_R (V) (PEAK VOLTAGE)					
	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
4.7	–	–	–	10 × 12.5	10 × 16	10 × 16
6.8	–	–	–	10 × 16	10 × 16	10 × 16 12.5 × 20
10	10 × 16	10 × 16	10 × 20	10 × 20	10 × 20	12.5 × 20
15	10 × 16	10 × 20	10 × 20	12.5 × 20	12.5 × 20	16 × 20
22	10 × 20	10 × 20	12.5 × 20 16 × 16	12.5 × 20	12.5 × 25	16 × 25
33	10 × 20	12.5 × 20	12.5 × 20 16 × 16	16 × 20	16 × 25	18 × 25
47	12.5 × 20	12.5 × 20	12.5 × 25	16 × 25	18 × 25	18 × 31.5
68	12.5 × 25	12.5 × 25	16 × 25	18 × 25	18 × 31.5	–
100	16 × 25	16 × 25	18 × 25	–	–	–
150	18 × 25	18 × 25	–	–	–	–

Other values and case sizes on request

DIMENSIONS in millimeters **AND AVAILABLE FORMS**



RADIAL STYLE: DIMENSIONS in millimeters			
NOMINAL CASE SIZE ØD × L	MAXIMUM SIZE D _{MAX.} × L _{MAX.}	LEAD Ød ± 0.05	LEAD SPACING S ± 0.5
10 × 12.5	10.5 × 14.5	0.6	5
10 × 16	10.5 × 18	0.6	5
10 × 20	10.5 × 22	0.6	5
12.5 × 20	13 × 22	0.6	5
12.5 × 25	13 × 27	0.6	5
16 × 16	16.5 × 18	0.8	7.5
16 × 20	16.5 × 22	0.8	7.5
16 × 25	16.5 × 27	0.8	7.5
16 × 31.5	16.5 × 33.5	0.8	7.5
18 × 20	18.5 × 22	0.8	7.5
18 × 25	18.5 × 27	0.8	7.5
18 × 31.5	18.5 × 33.5	0.8	7.5

**Aluminum Capacitors
Radial Type**
Vishay Roederstein

ELECTRICAL DATA	
SYMBOL	DESCRIPTION
C_R	rated capacitance at 120 Hz
U_R	rated voltage
$\tan \delta$	max. dissipation factor at 120 Hz
R_{ESR}	max. equivalent series resistance at 120 Hz
I_R	rated alternating current (rms) at 120 Hz and upper category temperature

ORDERING EXAMPLE

EKV 22/450 ± 20 %, size: 16mm x 25mm

Leads: Long - Ordering code: EKV 00JG222P00

Leads: Short - Ordering code: EKV 05...

Leads: Short and formed - Ordering code: EKV06...

Note

1. Unless otherwise specified, all electrical values apply at

 $T_{amb} = 20\text{ °C}$, $P = 80$ to 120 kPa, $RH = 45$ to 75%.

ELECTRICAL DATA AND ORDERING INFORMATION							
U_R (V)	C_R 120 Hz (μF)	NOMINAL CASE SIZE $\varnothing D \times L$ (mm)	$\tan \delta$ 120 Hz	R_{ESR} 120 Hz (Ω)	I_R 100 kHz/105 °C (mA)	WEIGHT (g)	CATALOG NUMBER
160	10	10 × 16	0.15	24	250	2.0	EKV00DD210M00K
	15	10 × 16	0.15	16	260	2.0	EKV00DD215M00K
	22	10 × 20	0.15	11	500	2.5	EKV00DE222M00K
	33	10 × 20	0.15	7.3	500	2.5	EKV00DE233M00K
	47	12.5 × 20	0.15	5.1	660	3.8	EKV00FE247M00K
	68	12.5 × 25	0.15	3.5	760	4.5	EKV00FG268M00K
	100	16 × 25	0.15	2.4	1120	7.0	EKV00JG310M00K
	150	18 × 25	0.15	1.6	1360	9.0	EKV00KG315M00K
200	10	10 × 16	0.15	24	250	2.0	EKV00DD210S00K
	15	10 × 20	0.15	16	350	2.5	EKV00DE215S00K
	22	10 × 20	0.15	11	500	2.5	EKV00DE222S00K
	33	12.5 × 20	0.15	7.3	600	3.8	EKV00FE233S00K
	47	12.5 × 20	0.15	5.1	660	3.8	EKV00FE247S00K
	68	12.5 × 25	0.15	3.5	760	4.5	EKV00FG268S00K
	100	16 × 25	0.15	2.4	1120	7.0	EKV00JG310S00K
	150	18 × 25	0.15	1.6	1360	9.0	EKV00KG315S00K
250	10	10 × 20	0.15	24	280	2.5	EKV00DE210N00K
	15	10 × 20	0.15	16	350	2.5	EKV00DE215N00K
	22	12.5 × 20	0.15	11	600	3.8	EKV00FE222N00K
	22	16 × 16	0.15	11	550	4.0	EKV00JD222N00K
	33	12.5 × 20	0.15	7.3	600	3.8	EKV00FE233N00K
	33	16 × 16	0.15	7.3	550	4.0	EKV00JD233N00K
	47	12.5 × 25	0.15	5.1	720	4.5	EKV00FG247N00K
	68	16 × 25	0.15	3.5	920	7.0	EKV00JG268N00K
	100	18 × 25	0.15	1.6	1200	9.0	EKV00KG310N00K
	350	4.7	10 × 12.5	0.20	68	150	1.5
6.8		10 × 16	0.20	47	220	2.0	EKV00DD168O00K
10		10 × 20	0.20	32	280	2.5	EKV00DE210O00K
15		12.5 × 20	0.20	21	350	3.8	EKV00FE215O00K
22		12.5 × 20	0.20	14.5	350	3.8	EKV00FE222O00K
33		16 × 20	0.20	9.7	500	5.0	EKV00JE233O00K
47		16 × 25	0.20	5.6	660	7.0	EKV00JG247O00K
68		18 × 25	0.20	4.7	840	9.0	EKV00KG268O00K

ELECTRICAL DATA AND ORDERING INFORMATION

U_R (V)	C_R 120 Hz (μ F)	NOMINAL CASE SIZE $\varnothing D \times L$ (mm)	$\tan \delta$ 120 Hz	R_{ESR} 120 Hz (Ω)	I_R 100 kHz/105 °C (mA)	WEIGHT (g)	CATALOG NUMBER
400	4.7	10 × 16	0.20	68	200	2.0	EKV00DD147X00K
	6.8	10 × 16	0.20	47	220	2.0	EKV00DD168X00K
	10	10 × 20	0.20	32	280	2.5	EKV00DE210X00K
	15	12.5 × 20	0.20	21	350	3.8	EKV00FE215X00K
	22	12.5 × 25	0.20	14.5	430	4.5	EKV00FG222X00K
	33	16 × 25	0.20	9.7	640	7.0	EKV00JG233X00K
	47	18 × 25	0.20	5.6	840	9.0	EKV00KG247X00K
	68	18 × 31.5	0.20	4.7	1000	11.0	EKV00KS268X00K
450	4.7	10 × 16	0.20	68	120	2.0	EKV00DD147P00K
	6.8	10 × 16	0.20	47	150	2.0	EKV00DD168P00K
	6.8	12.5 × 20	0.20	47	280	3.8	EKV00FE168P00K
	10	12.5 × 20	0.20	32	320	3.8	EKV00FE210P00K
	15	16 × 20	0.20	21	450	5.0	EKV00JE215P00K
	22	16 × 25	0.20	14.5	560	7.0	EKV00JG222P00K
	33	18 × 25	0.20	9.7	700	9.0	EKV00KG233P00K
	47	18 × 31.5	0.20	5.6	880	11.0	EKV00KS247P00K

LOW TEMPERATURE BEHAVIOURIMPEDANCE RATIO $Z(T_2)/Z(T_1)$ AT 120 Hz

T2/T1	RATED VOLTAGE (V)					
	160	200	250	350	400	450
-25/20	3	3	3	4	6	6

LEAKAGE CURRENT

Formula for calculation of the maximum leakage current for acceptance tests I_{L5} :
(Test conditions: U_R , 20 °C, 5 minutes)

$$I_{L5} [\mu A] \leq 0.03 \cdot C_R [\mu F] \cdot U_R [V] + 15 \mu A \quad (C_R \leq 1000)$$

$$I_{L5} [\mu A] \leq 0.02 \cdot C_R [\mu F] \cdot U_R [V] + 25 \mu A \quad (C_V > 1000)$$

PACKAGING UNITS

SIZE CODES		BULK		AMMO
		LONG LEADS	CUT LEADS	
DC	10 × 12.5	200	800	500
DD	10 × 16	200	700	500
DE	10 × 20	200	500	500
FE	12.5 × 20	100	300	400
FG	12.5 × 25	100	250	400
JD	16 × 16	50	200	250
JE	16 × 20	50	200	250
JG	16 × 25	50	150	250
KG	18 × 25	50	150	200
KS	18 × 31.5	50	100	200