

High-Voltage Electrolytic Capacitors with Radial Leads in Aluminium Case, pulse proof, Polarized, Insulated DIN 41 259 and 45 910 part 124

EKM - HV -

Electrolytic capacitors for vertical mounting in printed circuits.

Electric values:

DIN 41332 type II A
DIN 41259 pertinent style standard
DIN 45910 part 124 (without quality certificate)

Generic specifications:

DIN 45910 (≅ CECC 30000)

Sectional specifications:

The electric values and test criteria correspond to DIN 45910 part 12 and CECC 30300, however, without quality certificate
IEC 384-4 (general purpose grade)

Operating temperature range:

-40 ... 85°C (105°C)

Climatic category:

40 / 085 / 56

Capacitance tolerance:

-10 ... +50 %
(± 20 % upon request)

Service life:

min. 120,000 h at ≤ 40°C
min. 15,000 h at 70°C
min. 2,000 h at 85°C
min. 500 h at 105°C for ≤ 250V

Overall failure rate ≤ 3%;

Ratio: full failure to modification failure 10/90.

Peak voltage:

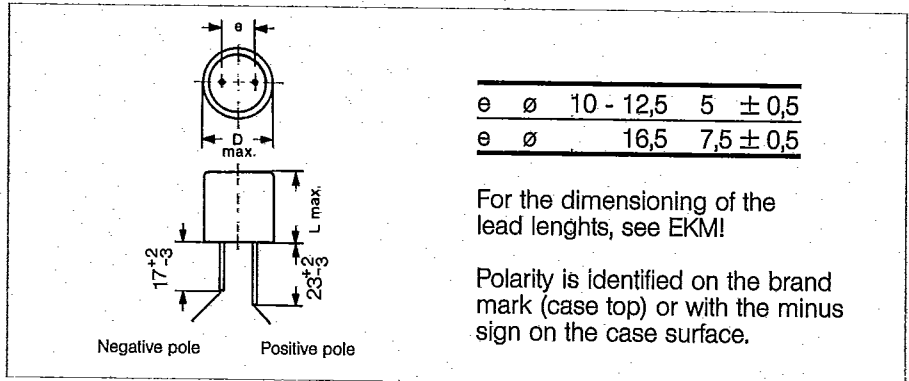
≅ 250 V = 1.15 · U_R
≅ 350 V = 1.1 · U_R

Dielectric strenght of insulation:

≅ 1.000 VDC

Leakage current:

I_{la} ≤ 0.015 · C_R · U_R + 10 μA
(C in μF, U in V)
measured at U_R and 20°C after 5 min.



e	ø	10 - 12,5	5 ± 0,5
e	ø	16,5	7,5 ± 0,5

For the dimensioning of the lead lengths, see EKM!

Polarity is identified on the brand mark (case top) or with the minus sign on the case surface.

Overview of dimension: (max. dimensions) mm

Cap.-value (μF)	Rated voltage (VDC)				
	160	200	250	350	385
2.2			8.7 x 12.7	10 x 12.7	10 x 16.5
3.3			10 x 12.7	10 x 16.5	10 x 21
4.7	10 x 12.7	10 x 12.7	10 x 12.7	10 x 21	12.5 x 21
10	10 x 12.7	10 x 16.5	10 x 21	12.5 x 25	12.5 x 25
22	10 x 21	12.5 x 21	12.5 x 21	16.5 x 25	16.5 x 30
33	12.5 x 21	12.5 x 21	12.5 x 25	16.5 x 36.5	
47	12.5 x 25	12.5 x 25	16.5 x 25		
100	16.5 x 25	16.5 x 30			

Dissipation factor: (limit values)

U _R	VDC	160	200	250	350	385
tan δ	100 Hz	0.07	0.07	0.07	0.10	0.10

measured at 0,5 V_{eff} and 20°C.

Equivalent series resistance (X) in Ω x μF (limit values)

U _R	VDC	160	200	250	350	385
Ω x μF	100 Hz	110	110	110	160	160

At 20°C referred to 1 μF; R_{ESR} = $\frac{X}{C_R}$ (Ω)

Impedance (Z) in Ω x μF (limit values) Z = $\frac{\text{Table value}}{C_R}$

U _R (VDC)	10 kHz / 20°C (Ω x μF)	10 kHz / -25°C (Ω x μF)	10 kHz / -40°C (Ω x μF)	100 kHz / 20°C (Ω x μF)
160	54	1100	2400	35
200	54	1100	2400	35
250	54	1100	2400	35
350	54	1800	6000	40
385	54	1800	7200	40

The practically achievable impedance is limited downwards by the ohmic share of the connections and the foil resistances. For this reason, calculated values below 0.05 Ω cannot be achieved in any case.

Roederstein



High-Voltage Electrolytic Capacitors with Aluminium Case, pulse proof, Polarized, Insulated, DIN 41259 and 45910 part 124

EKM
- HV -
Technical specifications: (individual values)

Rated capacitance (μF)	Rated voltage (VDC)	Dimensions D x L (mm) (nominal dimensions)	Dissipation factor $\tan \delta$ (100 Hz; 20°C) (limit values)	ESR (Ω) (100 Hz; 20°C) (limit values)	Impedance Z (Ω) (10 kHz; 20°C) (limit values)	Admissible ripple current (mA/100 Hz) 85°C	Weight (g)	Order no.
4.7	160	10 x 12.7	0.07	24	11.5	50	1.5	EKM 00 DC 147 M
10	160	10 x 12.7	0.07	11	5.4	65	1.5	EKM 00 DC 210 M
22	160	10 x 20	0.07	5	2.5	115	2.5	EKM 00 DE 222 M
33	160	12.5 x 20	0.07	3.4	1.64	150	3.8	EKM 00 FE 233 M
47	160	12.5 x 25	0.07	2.3	1.15	200	4.5	EKM 00 FG 247 M
100	160	16.5 x 25	0.07	1.1	0.54	350	5.3	EKM 00 JG 310 M
4.7	200	10 x 12.7	0.07	24	11.5	50	1.5	EKM 00 DC 147 S
10	200	10 x 16	0.07	11	5.4	70	2.0	EKM 00 DD 210 S
22	200	12.5 x 20	0.07	5.1	2.5	125	3.8	EKM 00 FE 222 S
33	200	12.5 x 20	0.07	3.4	1.64	160	2.8	EKM 00 FE 233 S
47	200	12.5 x 25	0.07	2.4	1.15	210	4.5	EKM 00 FG 247 S
100	200	16.5 x 30	0.07	1.1	0.54	350	10	EKM 00 JJ 310 S
2.2	250	8.7 x 12.7	0.07	51	25	35	1.5	EKM 00 CC 122 N
3.3	250	10 x 12.7	0.07	34	16.4	45	1.5	EKM 00 DC 133 N
4.7	250	10 x 12.7	0.07	24	11.5	50	1.5	EKM 00 DC 147 N
10	250	10 x 20	0.07	11	5.4	90	2.5	EKM 00 DE 210 N
22	250	12.5 x 20	0.07	15.1	2.5	200	3.8	EKM 00 FE 222 N
33	250	12.5 x 25	0.07	3.4	1.64	300	4.5	EKM 00 FG 233 N
47	250	16.5 x 25	0.07	2.4	1.15	400	5.3	EKM 00 JG 247 N
2.2	350	10 x 12.7	0.10	72	25	45	1.5	EKM 00 DC 122 O
3.3	350	10 x 16	0.10	48	16.4	50	2.0	EKM 00 DD 133 O
4.7	350	10 x 20	0.10	34	11.5	70	2.5	M 00 DE 147 O
10	350	12.5 x 25	0.10	16	5.4	110	4.5	EKM 00 FG 210 O
22	350	16.5 x 25	0.10	7.2	2.5	190	5.3	EKM 00 JG 222 O
33	350	16.5 x 35	0.10	4.8	1.15	260	12	EKM 00 JL 233 O
2.2	385	10 x 16	0.10	72	25	50	2.0	EKM 00 DD 122 R
3.3	385	10 x 20	0.10	48	16.4	60	2.5	EKM 00 DE 133 R
4.7	385	12.5 x 20	0.10	34	11.5	80	3.8	EKM 00 FE 147 R
10	385	12.5 x 25	0.10	16	5.4	110	4.5	EKM 00 FG 210 R
22	385	16.5 x 30	0.10	7.2	2.5	200	10	EKM 00 JJ 222 R

Order example:

EKM 10/200, dim. 10 x 20

EKM 00 DE 210 S

EKMG (5.1 mm lead length)

EKM 05 DE 210 S

1) See "General Information" for the ripple current load in dependence on the environmental temperature and the frequency dependence of the superimposed ripple current.