

K50-92

ALUMINUM ELECTROLYTIC CAPACITOR

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AZHYAR.673541.020 TU



Axial leaded capacitors. Polar. Sealed. Isolated and non-isolated.

Capacitors are suitable for application in direct current, ripple current and pulse current circuits in secondary power supplies and converter equipment. Capacitors are available in all-climate and temperate/cold climate version.

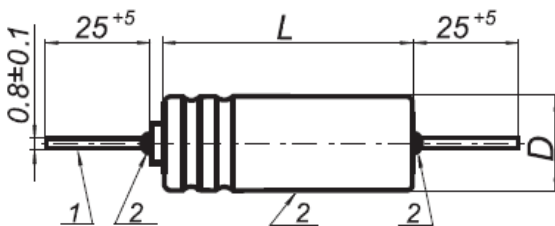
The capacitor type is produced for the internal wiring with the requirements to 98% air humidity at $T=35^{\circ}\text{C}$ and $T=25^{\circ}\text{C}$.

It is recommended to use this capacitor type as substitution for capacitors K50-15, K50-29, K50-20, K50-24 type.

MAIN PARAMETERS

Name	Value
Rated voltage, V	6.3...450
Rated capacitance, μF	1...4 700
Capacitance tolerance (25 °C, 50 Hz), %	+50...-20; ± 20
Temporary overvoltage within 10 sec., V	1.15 U_R ($U_R \leq 300$) 1.1 U_R ($U_R > 300$)
Maximum operating temperature T_{env} , °C	+100
Minimal operating temperature T_{env} , °C	-60

CAPASITOR PHYSICAL CONFIGURATION



- 1 – Positive terminal
- 2 – Enamel coating

CAPACITOR ELECTRIC PARAMETERS

U _R , V	C _R , μF	tg δ, %, 25°C, 50 Hz, max	I _{LEAK} , μA, max	Z*, Ohm, 25	U _F , V, 100°C, 50 Hz, max
6.3	47	20	16	3	0.83
6.3	100	20	23	1.7	0.83
6.3	220	20	24	0.8	0.83
6.3	470	20	40	0.3	0.83
6.3	1000	20	73	0.3	0.62
6.3	2200	20	235	0.15	0.62
6.3	4700	20	344	0.1	0.33
16	22	20	17	2.5	2.11
16	47	20	25	2	1.58
16	100	20	26	1	1.58
16	220	20	45	0.4	1.58
16	470	20	85	0.3	1.27
16	1000	20	253	0.25	1.06
16	2200	20	375	0.1	0.63
25	10	20	15	4	3.3
25	22	20	21	1.6	2.48
25	47	20	22	1	2.48
25	100	20	35	0.5	2.48
25	220	20	65	0.3	1.98
25	470	20	217	0.25	1.32
25	1000	20	316	0.25	0.99
25	2200	20	469	0.1	0.99
63	4.7	20	16	3.5	6.24
63	10	20	23	3	4.16
63	22	20	24	1.2	3.33
63	47	20	40	0.6	2.49
63	100	20	73	0.4	2.49
63	220	20	235	0.25	2.08
63	470	20	344	0.25	1.66
63	1000	20	502	0.2	1.25
100	2.2	15	14	13	9.9
100	4.7	15	19	8	7.92
100	10	15	30	5	6.6
100	22	15	32	3	5.28

U_R, V	C_R, μF	tg δ, %, 25°C, 50 Hz, max	I_{LEAK}, μA, max	Z*, Ohm, 25	U_F, V, 100°C, 50 Hz, max
100	47	15	57	0.8	3.96
100	100	15	110	0.7	3.96
160	1	10	25	55	10.56
160	2.2	10	31	25	10.56
160	4.7	10	43	12.5	10.56
160	10	10	48	7	8.45
160	22	10	106	4	8.45
160	47	10	226	2	6.34
300	4.7	10	42	15	15.84
300	10	10	90	7	15.84
300	22	10	198	4	13
300	47	10	423	2	9.54
350	2.2	10	43	30	18.48
350	4.7	10	49	20	18.48
350	10	10	105	7	17.92
350	22	10	231	5	13
450	2.2	10	50	35	23.76
450	4.7	10	63	20	20.79
450	10	10	135	15	17.92
450	22	10	297	6	13

* Capacitor impedance Z is measured at frequency 100 kHz for capacitors C_R ≤ 1 000 μF, and at frequency 10 kHz for capacitors C_R > 1 000 μF

CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, t_{λ} , hours	Capacitor failure rate, λ , 1/hour, max
Maximum-permissible mode (U_R , $T_{env}=100^{\circ}\text{C}$) for capacitors \varnothing 6 mm	1 000	10^{-4}
Maximum-permissible mode (U_R , $T_{env}=100^{\circ}\text{C}$) for capacitors \varnothing 8.5; 12; 16 mm	1 500	10^{-4}
Light mode (U_R , $T_{env}=85^{\circ}\text{C}$) for capacitors \varnothing 6 mm	2 000	5×10^{-5}
Light mode (U_R , $T_{env}=85^{\circ}\text{C}$) for capacitors \varnothing 8.5; 12; 16 mm	3 000	3×10^{-5}
Light mode (U_R , $T_{env}=70^{\circ}\text{C}$) for capacitors of all dimensions	7 500	2×10^{-5}
Light mode ($0.8U_R$, $T_{env}=100^{\circ}\text{C}$) for capacitors of all dimensions	2 000	5×10^{-5}
Light mode* ((0.2-0.7) U_R , $T_{env}=70^{\circ}\text{C}$) for capacitors $U_R \leq 100\text{V}$	25 000	5×10^{-6}
Light mode* ((0.2-0.5) U_R , $T_{env}=70^{\circ}\text{C}$) for capacitors $U_R > 100\text{V}$	25 000	5×10^{-6}
Light mode* ((0.2-0.6) U_R , $T_{env}=60^{\circ}\text{C}$) for capacitors of all dimensions	90 000	10^{-6}
Light mode* ((0.2-0.5) U_R , $T_{env}=60^{\circ}\text{C}$ for capacitors of all dimensions	150 000	10^{-6}
Storageability Gamma-rated time of capacitor storageability T_{cy} at $\gamma=95\%$, years, min	25	

* permissible voltage is minimum 0.8V

EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K50-92 – 6.3V – 47 μF (+50 -20)% – AZHYAR.673541.020 TU

CAPACITOR K50-92 – 6.3V – 47 μF (+50 -20)% – B – AZHYAR.673541.020 TU

CAPACITOR K50-92 – 6.3V – 47 μF $\pm 20\%$ – AZHYAR.673541.020 TU

CAPACITOR K50-92 – 6.3V – 47 μF $\pm 20\%$ – B – AZHYAR.673541.020 TU