

K50-84

ALUMINUM ELECTROLYTIC CAPACITOR

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AZHYAR. 673541.013 TU



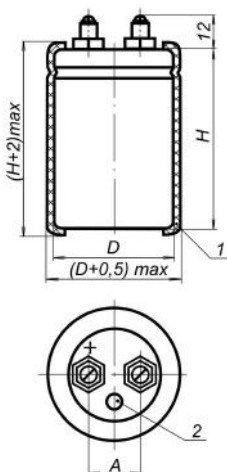
Low impedance capacitors with radial screw terminals. Capacitor is used for operation in direct current and ripple current circuits, secondary power sources and converter equipment. Capacitor is available in all-climate and temperate/cold climate version. Sealed; isolated.

It is recommended to use this capacitor type as substitution for capacitors K50-18, K50-32, K50-33A, K50-37 types.

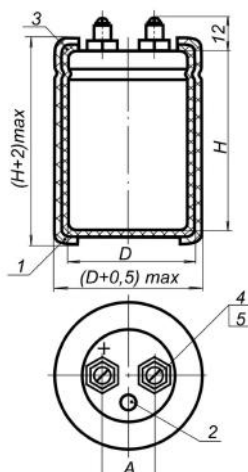
MAIN PARAMETERS

Name	Value
Rated voltage, V	16...100
Rated capacitance, μF	1 500...100 000
Temporary overvoltage within 10 sec., V	1.15 U_R
Capacitance tolerance (25 °C, 50 Hz), %	+30...-10; ± 20
Maximum operating temperature T_{env} , °C	+100
Minimal operating temperature T_{env} , °C	-60

Temperate/cold climate version



All climate version



A – spacing between terminals

- 1 – Insulating cover
- 2 – Explosion proof valve
- 3 – Paintwork
- 4 – Screw BM5-6g
- 5 – Washer 5.65

D, mm	A, mm
35	12.5 \pm 0.15
50	22.5 \pm 0.15
65	28.5 \pm 0.15

CAPACITORS OVERALL DIMENSIONS AND MASS

U_R, V	16	25	40	63	100
$C_R, \mu F$	<u>DxH, mm</u> mass, g				
1 500					<u>35x55</u> 80
3 300					<u>35x105</u> 135
4 700					<u>50x80</u> 300
10 000				<u>50x80</u> 300	<u>65x80</u> 450
15 000				<u>65x80</u> 450	<u>65x105</u> 600
22 000		<u>35x105</u> 135	<u>50x80</u> 300	<u>65x105</u> 600	
33 000	<u>35x105</u> 135	<u>50x80</u> 300	<u>65x80</u> 450		
47 000	<u>50x80</u> 300	<u>65x80</u> 450	<u>65x105</u> 600		
68 000	<u>65x80</u> 450	<u>65x105</u> 600			
100 000	<u>65x105</u> 600				

CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, t_λ , hours	Capacitor failure rate, λ , 1/hour, max
Maximum-permissible mode (U_R , $T_{env}=85\text{ }^\circ C$)	10 000	10^{-5}
Maximum-permissible mode ($0.6U_R$, $T_{env}=100\text{ }^\circ C$)	5 000	2×10^{-5}
Light mode ($0.6U_R$, $T_{env}=60\text{ }^\circ C$)	100 000	5×10^{-7}
Light mode ($0.6U_R$, $T_{env}=40\text{ }^\circ C$)	200 000	5×10^{-8}
Storageability Gamma-rated time of capacitor storageability T_{cy} at $y=95\%$, years, min	25	

CAPACITOR ELECTRIC PARAMETERS VALUE WHEN DELIVERED

U _R , V	C _R , μF	tg δ, %, 25 °C, 50 Hz, max	I _{LEAK} , μA, 25 °C, after 5 min., max	Z, Ohm, 25 °C, 20kHz, max	ESR, Ohm, 25 °C, 100Hz, max	I _R , A, 85 °C, 50 Hz, max	
16	33 000	25	2 398	0.043	0.017	14.0	
	47 000		2 862	0.041	0.015	16.7	
	68 000		3 442	0.039	0.013	21.0	
	100 000		4 174	0.038	0.010	27.7	
25	22 000		2 447	0.039	0.028	9.5	
	33 000		2 997	0.038	0.026	12.6	
	47 000		3 577	0.027	0.020	16.0	
	68 000		4 303	0.026	0.017	21.4	
40	22 000		20	3 096	0.036	0.015	12.9
	33 000			3 791	0.034	0.013	17.3
	47 000			4 525	0.028	0.010	23.9
63	10 000			15	2 619	0.038	0.018
	15 000	3 208			0.032	0.015	16.0
	22 000	3 885			0.029	0.012	19.6
100	1 500	1 278	0.110		0.083	5.6	
	3 300	1 896	0.059		0.037	9.0	
	4 700	2 263	0.056		0.029	10.2	
	10 000	3 300	0.045		0.018	15.0	
	15 000	4 042	0.036		0.016	19.6	

Ripple current effective value

versus temperature and frequency can be found from the formula $I_{RO} = I_R \times K_T \times K_F$, where

I_R – allowable ripple current at 85 °C, 50 Hz (See Table “Capacitor electric parameters”)

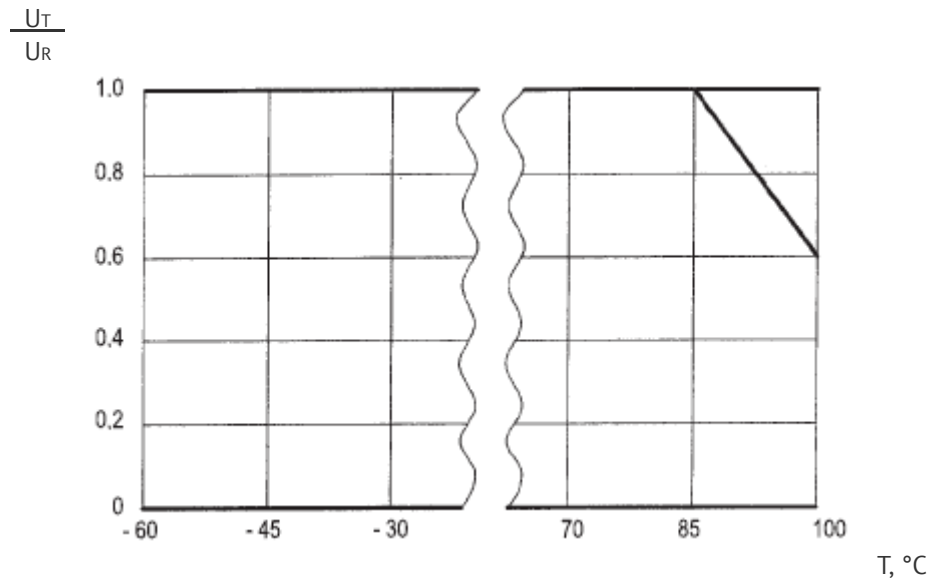
K_T - I_R CORRECTION FACTOR VERSUS TEMPERATURE

T _{env} , °C	25	40	50	60	70	85	100
K _T	1.75	1.70	1.65	1.52	1.33	1.00	0.60

K_F - I_R CORRECTION FACTOR VERSUS FREQUENCY

F, Hz	50	100	200	300	400	500	1 000	≥ 2 000
K _F	1	1.25	1.4	1.48	1.51	1.54	1.58	1.6

VOLTAGE VERSUS TEMPERATURE



EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K50-84 – 16V – 33000 μF $\pm 20\%$ I AZHYAR.673541.013 TU

CAPACITOR K50-84 – 16V – 33000 μF ($\pm 20\%$) I B AZHYAR.673541.013 TU