

# K52-19

TANTALUM WET-SLUG CAPACITOR

elecond-market@elcudm.ru

+7 (34147) 2-99-89

AZHYAR.673543.005 TU

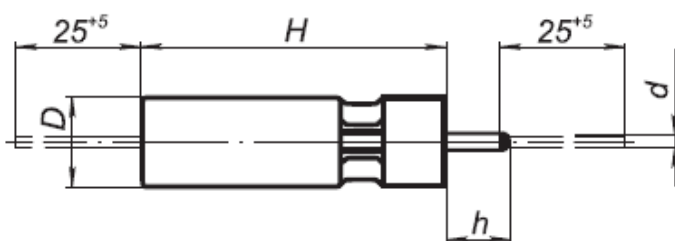
Hermetically-sealed polar capacitors. Capacitors are suitable for application in direct current and ripple current circuits. Capacitors are available in all-climate version.



## MAIN PARAMETERS

Name	Value
Rated voltage, V	100...200
Rated capacitance, $\mu\text{F}$	1.5...220
Capacitance tolerance (20 °C, 50 Hz), %	$\pm 10$ ; $\pm 20$ ; $\pm 30$
Temporary overvoltage within 10 sec., V	1.15 $U_R$
Maximum operating temperature $T_{env}$ , °C	+125 (for $U_R = 100$ and 125 V) +70 (for $U_R = 160$ and 200 V)
Minimal operating temperature $T_{env}$ , °C	-40

## CAPASITOR PHYSICAL CONFIGURATION



DxH, mm	h, mm	d, mm
4.8x18	6.5	0.6
6.0x20	5	0.6
7.5x22	5	0.8
9x30	5	0.8
11x32	5	0.8

## CAPACITORS OVERALL DIMENSIONS AND MASS

$U_R, V$	100	125	160	200
$C_R, \mu F$	<u>DxH, mm</u> mass, g			
1.5			$\frac{4.8 \times 18}{3.5}$	$\frac{4.8 \times 18}{3.5}$
2.2			$\frac{4.8 \times 18}{3.5}$	$\frac{4.8 \times 18}{3.5}$
3.3			$\frac{4.8 \times 18}{3.5}$	$\frac{4.8 \times 18}{3.5}$
4.7			$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$
6.8		$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$
10		$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$
15		$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$
22	$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$
33	$\frac{4.8 \times 18}{3.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$
47	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{11 \times 32}{19.5}$
68	$\frac{6 \times 20}{6.5}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$	$\frac{11 \times 32}{19.5}$
100	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{11 \times 32}{19.5}$	
150	$\frac{9 \times 30}{18}$	$\frac{11 \times 32}{19.5}$		
220	$\frac{11 \times 32}{19.5}$			

## CAPACITOR ELECTRIC PARAMETERS VALUE WHEN DELIVERED

$U_R, V$	$C_R, \mu F$	$tg \delta, \%, 20 \text{ }^\circ C, 50 \text{ Hz, max}$	$I_{LEAK}, \mu A, 20 \text{ }^\circ C, \text{ after } 10 \text{ min., max}$	$ESR^*, \text{ Ohm, } 20 \text{ }^\circ C, 100\text{Hz, max}$	$Z, \text{ Ohm, } 20 \text{ }^\circ C, 10\text{kHz, max}$	$I^*, \text{ mA, } 20 \text{ }^\circ C, 40\text{kHz, max}$
100	22	7.0	5.4	5.1	2.2	600
	33	10.0	7.6	4.6	2.1	650
	47	12.0	15.1	4.1	1.9	700
	68	14.0	21.4	3.1	1.8	820
	100	15.0	31.0	2.4	1.5	1 000
	150	20.0	46.0	2.1	0.6	1 200
	220	25.0	67.0	1.9	0.5	1 800

$U_R, V$	$C_R, \mu F$	$tg \delta, \%, 20 \text{ }^\circ C, 50 \text{ Hz, max}$	$I_{LEAK}, \mu A, 20 \text{ }^\circ C, \text{ after } 10 \text{ min.}, \text{ max}$	$ESR^*, \text{ Ohm}, 20 \text{ }^\circ C, 100\text{Hz, max}$	$Z, \text{ Ohm}, 20 \text{ }^\circ C, 10\text{kHz, max}$	$I^*, \text{ mA}, 20 \text{ }^\circ C, 40\text{kHz, max}$
125	6.8	6.0	2.7	13.2	4.2	350
	10	6.0	3.5	9.6	3.8	450
	15	6.5	4.8	7.1	3.6	500
	22	7.0	6.5	5.2	2.1	680
	33	9.0	13.4	4.6	1.4	700
	47	9.0	18.6	3.1	1.3	860
	68	15.0	26.5	2.8	0.6	1 100
	100	18.0	38.5	2.6	0.6	1 450
	150	20.0	57.3	2.2	0.5	1 750
160	1.5	10.0	1.5	106.0	20.0	150
	2.2	14.0	1.7	102.0	16.0	170
	3.3	16.0	2.1	78.0	15.0	195
	4.7	22.0	2.5	75.0	14.0	220
	6.8	26.0	3.2	65.0	9.0	250
	10	30.0	4.2	48.0	8.0	290
	15	40.0	5.8	41.0	7.5	300
	22	48.0	8.0	35.0	6.0	320
	33	58.0	16.8	30.0	5.5	340
	47	62.0	23.6	24.0	3.5	400
	68	70.0	33.6	16.5	3.5	650
	100	82.0	49.0	12.0	2.5	830
200	1.5	8.0	1.6	106.0	25.0	60
	2.2	10.0	1.9	102.0	22.0	80
	3.3	12.0	2.3	78.0	20.0	100
	4.7	15.0	2.9	75.0	17.0	150
	6.8	20.0	3.7	65.0	16.0	170
	10	25.0	5.0	48.0	15.0	190
	15	33.0	7.0	41.0	14.5	205
	22	48.0	14.2	35.0	11.0	500
	33	55.0	20.8	30.0	8.0	530
	47	60.0	29.2	24.0	7.5	700
	68	70.0	41.8	16.5	6.0	780

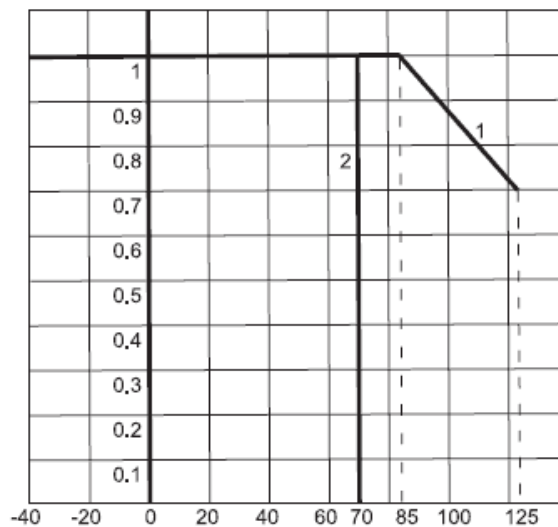
\* Reference data

## CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, $t_{\lambda}$ , hours	Capacitor failure rate, $\lambda$ , 1/hour, max
Maximum-permissible mode for $U_R=100$ ; 125 V ( $0.7U_R$ , $T_{env}=125^{\circ}\text{C}$ )	1 000	$10^{-6}$
Maximum-permissible mode for $U_R=100$ ; 125 V ( $U_R$ , $T_{env}=85^{\circ}\text{C}$ )	5 000	$10^{-6}$
Maximum-permissible mode for $U_R=160$ ; 200 V ( $U_R$ , $T_{env}=70^{\circ}\text{C}$ )	5 000	$10^{-6}$
Light mode ( $U_R$ , $T_{env}=55^{\circ}\text{C}$ )	150 000	$10^{-7}$
Storageability Gamma-rated time of capacitor storageability $T_{cy}$ at $\gamma=97.5\%$ , years, min	25	

## VOLTAGE VERSUS TEMPERATURE

$$\frac{U_T}{U_R}$$



T, °C

- 1 – for capacitors  $U_R = 100$ ; 125 V
- 2 – for capacitors  $U_R = 160$ ; 200 V

## EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K52-19 – 100V – 220 $\mu$ F  $\pm$ 20% AZHYAR.673543.005 TU