

K52-20

TANTALUM WET-SLUG CAPACITOR

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AZHYAR.673543.009 TU

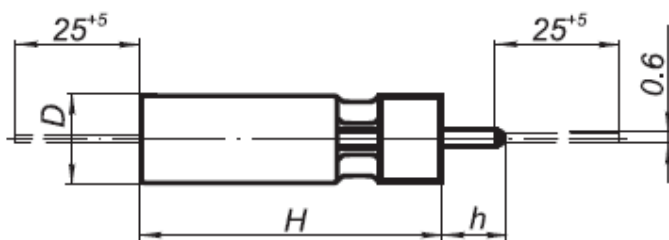


Hermetically-sealed polar capacitors in all tantalum case. Capacitors are suitable for application in direct current, ripple current and pulse current circuits. Capacitors are available in all-climate version.

MAIN PARAMETERS

Name	Value
Rated voltage, V	6.3...125
Rated capacitance, μF	6.8...470
Capacitance tolerance (20 °C, 50 Hz), %	± 10 ; ± 20 ; ± 30
Temporary overvoltage within 10 sec., V	1.15 U_R
Maximum operating temperature T_{env} , °C	+175
Minimal operating temperature T_{env} , °C	-60

CAPASITOR PHYSICAL CONFIGURATION



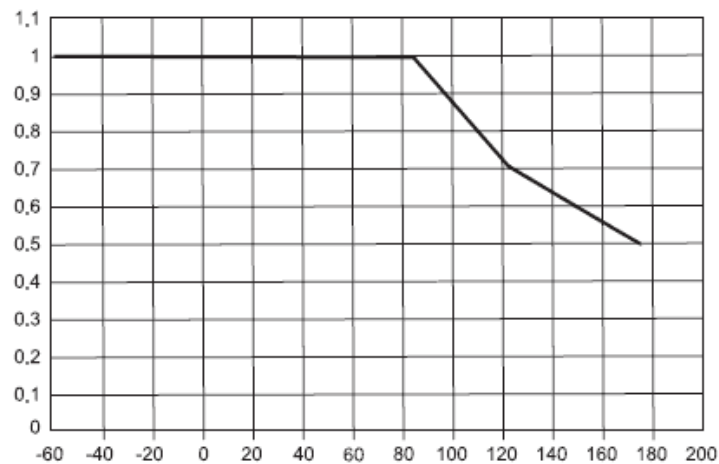
DxH, mm	h, mm
4.8x18	6.5
6x20	5
7.5x22	5
9x30	5

CAPACITORS OVERALL DIMENSIONS AND MASS

U_R, V	6.3	16	25	32	50	63	100	125
$C_R, \mu F$	$D \times H, mm$ mass, g							
6.8							$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$
10						$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$
15					$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$
22				$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$
33			$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$
47		$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$
68	$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$	
100	$\frac{4.8 \times 18}{3.5}$	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$		
150	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$			
220	$\frac{6 \times 20}{6.5}$	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$				
330	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$					
390	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$	$\frac{9 \times 30}{18}$					
470	$\frac{7.5 \times 22}{10}$	$\frac{9 \times 30}{18}$						

VOLTAGE VERSUS TEMPERATURE

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



$T, ^\circ C$

CAPACITOR ELECTRIC PARAMETERS VALUE WHEN DELIVERED

U_R, V	$C_R, \mu F$	$tg \delta, \%, 20 \text{ }^\circ C, 50 \text{ Hz, max}$	$I_{LEAK}, \mu A, 20 \text{ }^\circ C, \text{ after } 10 \text{ min., max}$	$Z, \text{ Ohm}, 20 \text{ }^\circ C, 10kHz, \text{ max}$
6.3	68	9.0	1.9	2.7
6.3	100	10.0	2.3	2.5
6.3	150	12.0	2.9	2.3
6.3	220	14.0	3.8	2.0
6.3	330	17.0	5.2	1.8
6.3	390	19.0	5.9	1.5
6.3	470	22.0	6.9	1.4
16	47	9.0	2.5	3.6
16	68	10.0	3.2	3.3
16	100	11.0	4.2	3.0
16	150	12.0	5.8	2.7
16	220	14.0	8.0	2.3
16	330	15.0	16.8	2.0
16	390	16.0	19.7	1.7
16	470	18.0	23.6	1.5
25	33	9.0	2.7	4.5
25	47	10.0	3.4	4.0
25	68	12.0	4.4	3.5
25	100	14.0	6.0	3.0
25	150	15.0	8.5	2.5
25	220	18.0	17.5	2.0
25	330	20.0	25.8	1.7
25	390	22.0	30.3	1.4
32	22	9.0	2.4	5.4
32	33	10.0	3.1	4.7
32	47	10.0	4.0	4.0
32	68	12.0	5.4	3.3
32	100	13.0	7.4	2.7
32	150	14.0	15.4	2.3
32	220	16.0	22.1	1.8
50	15	4.5	2.5	7.2
50	22	5.0	3.2	6.5
50	33	6.0	4.3	5.8
50	47	7.0	5.7	5.0

U_R, V	$C_R, \mu F$	$\text{tg } \delta, \%, 20 \text{ }^\circ\text{C}, 50 \text{ Hz, max}$	$I_{LEAK}, \mu A, 20 \text{ }^\circ\text{C, after 10 min., max}$	$Z, \text{ Ohm}, 20 \text{ }^\circ\text{C}, 10\text{kHz, max}$
50	68	8.0	7.8	4.0
50	100	9.0	16.0	3.0
50	150	10.0	23.5	2.0
63	10	4.5	2.3	9.0
63	15	5	2.9	8.0
63	22	6	3.8	6.9
63	33	7.0	5.2	5.6
63	47	8.0	6.9	4.4
63	68	9.0	13.9	3.2
63	100	10.0	19.9	2.0
100	6.8	4.5	2.4	13.5
100	10	5.0	3.0	12.0
100	15	6.0	4.0	10.5
100	22	7.0	5.4	8.8
100	33	8.0	7.6	6.9
100	47	9.0	15.1	4.9
100	68	10.0	21.4	3.0
125	6.8	7.0	2.7	15.0
125	10	7.0	3.5	12.7
125	15	7.0	4.8	10.6
125	22	7.5	6.5	8.2
125	33	7.5	13.4	6.7
125	47	7.5	18.6	5.0

CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, t_{λ} , hours	Capacitor failure rate, λ , 1/hour, max
Maximum-permissible mode ($0.5U_R$, $T_{env}=175^{\circ}\text{C}$)	1 000	5×10^{-7}
Maximum-permissible mode (U_R , $T_{env}=85^{\circ}\text{C}$)	5 000	5×10^{-7}
Light mode ($0.6U_R$, $T_{env}=55^{\circ}\text{C}$)	150 000	5×10^{-8}
Light mode ($0.5U_R$, $T_{env}=45^{\circ}\text{C}$)	300 000	5×10^{-8}
Storageability Gamma-rated time of capacitor storageability T_{cy} at $\gamma=95\%$, years, min	25	

EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K52-20 – 63V – $100\mu\text{F} \pm 10\%$ AZHYAR.673543.009 TU