

K53-71

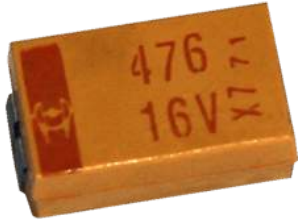
TANTALUM SOLID-ELECTROLYTE CAPACITOR

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AZHYAR.673546.009 TU

Polar fixed capacitors with low ESR are suitable for application in direct current, ripple current and pulse current circuits in products intended for the internal wiring.



MAIN PARAMETERS

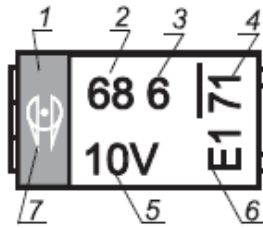
Name	Value
Rated voltage, V	3.2...20
Rated capacitance, μF	22...680
Capacitance tolerance (20°C, 50 Hz), %	± 10 ; ± 20 - for rated value 16V x 33 μF ; 16V x 47 μF ; 20V x 22 μF ; ± 20 - for other rated values
Maximum operating temperature Tenv, °C	+105
Minimal operating temperature Tenv, °C	-60
Temporary overvoltage within 10 sec., V	1.15 U _R

CAPACITORS OVERALL DIMENSIONS AND MASS



Case code	L, mm	B, mm	H, mm	Mass, g, max
C	6.0 \pm 0.3	3.2 \pm 0.3	2.5 \pm 0.3	0.3
V	7.3 \pm 0.3	4.3 \pm 0.3	2.0 \pm 0.2	0.4
D	7.3 \pm 0.3	4.3 \pm 0.3	2.9 \pm 0.3	0.5
E	7.3 \pm 0.3	4.3 \pm 0.3	4.1 \pm 0.3	0.6

MARKING OF CAPACITORS



- 1 – Positive terminal (color stripe)
- 2 – Rated capacitance, pF
- 3 – Capacitance multiplier code
- 4 – Product code (only “71” is marked, stripe unavailability is acceptable)
- 5 – Rated voltage, V
- 6 – Production date code
- 7 – Trade mark

MARKING CODES DESIGNATION

Code	Year
K	2018
L	2019
M	2020
N	2021
P	2022
R	2023
S	2024
T	2025
U	2026
V	2027
W	2028
X	2029

Code	Month	Code	Month
1	January	7	July
2	February	8	August
3	March	9	September
4	April	O	October
5	May	N	November
6	June	D	December

Capacitance multiplier code	Capacitance multiplier
4	10^4
5	10^5
6	10^6
7	10^7
8	10^8

CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, t_{λ} , hours	Capacitor failure rate, λ , 1/hour, max
Maximum-permissible mode ($0.8U_R$, $T_{env}=105^{\circ}C$)	20 000	10^{-6}
Maximum-permissible mode (U_R , $T_{env}=85^{\circ}C$)		
Light mode ($0.5U_R$, $T_{env}=55^{\circ}C$)	150 000	10^{-8}
Storageability Gamma-rated time of capacitor storageability T_{cy} at $\gamma=97.5\%$, years, min	25	

CAPACITOR ELECTRIC PARAMETERS VALUE WHEN DELIVERED

Case code	$C_R, \mu F$	$tg \delta, \%, 25^\circ C, 50 \text{ Hz, max}$	$I_{LEAK}, \mu A, 25^\circ C, \text{ after 5 min., max}$	$ESR, m\Omega, 25^\circ C, 100kHz, \text{ max}$	$I_R, A, 25^\circ C, 100kHz, \text{ max}$
$U_R = 3.2 \text{ V}$					
V	330	10	116	40	1.8
D	680	10	238	40	1.9
$U_R = 4 \text{ V}$					
C	150	8	60	45	1.6
V	150	10	60	40	1.8
D	150	10	60	70	1.5
C	220	8	88	45	1.6
V	220	10	88	45	1.7
D	220	10	88	65	1.5
V	330	10	132	40	1.8
D	330	10	132	45	1.8
D	470	10	188	40	1.9
D	680	10	272	35	2.1
E	680	10	272	35	2.2
$U_R = 6.3 \text{ V}$					
C	100	8	63	45	1.6
D	100	10	63	70	1.5
C	150	8	95	45	1.6
D	150	10	95	55	1.7
V	220	10	139	40	1.8
D	220	10	139	50	1.7
D	330	10	208	45	1.8
E	470	10	296	40	2.0
$U_R = 10 \text{ V}$					
C	68	8	68	45	1.6
V	68	10	68	100	1.1
D	68	10	68	100	1.2
V	100	10	100	50	1.6
D	100	10	100	80	1.4
D	150	10	150	55	1.7
D	220	10	220	40	1.9
E	330	10	330	40	2.0

Case code	C _R , μF	tg δ, %, 25°C, 50 Hz, max	I _{LEAK} , μA, 25°C, after 5 min., max	ESR, mOhm, 25°C, 100kHz, max	I _R , A, 25°C, 100kHz, max
U_R = 16 V					
V	33	10	53	90	1.2
V	47	10	75	80	1.3
D	47	10	75	100	1.2
U_R = 20 V					
V	22	10	44	100	1.1

CAPACITORS CASE CODES

C _R , μF	3.2	4	6.3	10	16	20
	U_R, V					
22						V
33					V	
47					V,D	
68				C,V,D		
100			C,D	V,D		
150		C,V,D	C,D	D		
220		C,V,D	V,D	D		
330	V	V,D	D	E		
470		D	E			
680	D	E				

EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K53-71 "V" – 20V – 22μF ±20% AZHYAR.673546.009 TU