

# K53-72

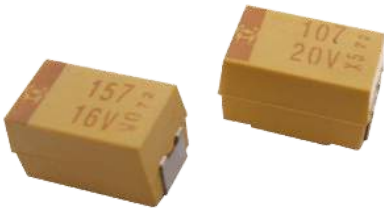
TANTALUM SOLID-ELECTROLYTE CAPACITOR

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AZHYAR.673546.008 TU

Multi-sectional protected polar capacitors are designed for operation in direct current, ripple current and pulse current circuits. Capacitors are available in all-climate version.



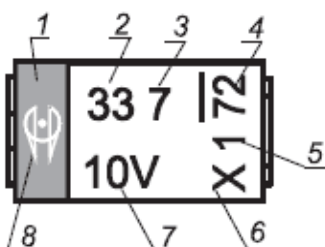
## MAIN PARAMETERS

Name	Value
Rated voltage, V	2.5...32
Rated capacitance, $\mu\text{F}$	22...1 500
Capacitance tolerance (20°C, 50 Hz), %	$\pm 20$ - for ated value 2.5V x 1 000 $\mu\text{F}$ ; 2.5V x 1 500 $\mu\text{F}$ ; 4V x 1 000 $\mu\text{F}$ ; $\pm 10$ ; $\pm 20$ - for other rated values
Maximum operating temperature Tenv, °C	+125
Minimal operating temperature Tenv, °C	-60
Temporary overvoltage within 10 sec., V	1.15 U <sub>R</sub>

## CAPACITORS OVERALL DIMENSIONS AND MASS



Case code	L, mm	W, mm	H, mm	Mass, g, max
E	7.3 $\pm$ 0.3	4.3 $\pm$ 0.3	4.1 $\pm$ 0.3	0.7



- 1 – Positive terminal (color stripe)
- 2 – Rated capacitance, pF
- 3 – Capacitance multiplier code
- 4 – Product code (only “72” is marked, stripe unavailability is acceptable)
- 5 – Month of manufacture code
- 6 – Year of manufacture code
- 7 – Rated voltage, V
- 8 – 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

Capaci-tance multi-plier code	Capaci-tance multi-plier
4	10 <sup>4</sup>
5	10 <sup>5</sup>
6	10 <sup>6</sup>
7	10 <sup>7</sup>
8	10 <sup>8</sup>

## CAPACITOR ELECTRIC PARAMETERS VALUE WHEN DELIVERED

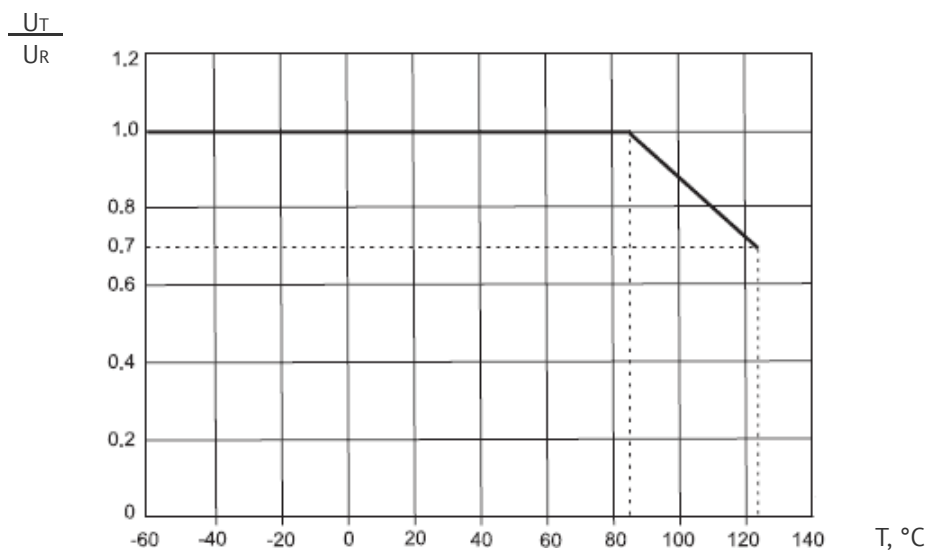
U <sub>R</sub> , V	C <sub>R</sub> , μF	tg δ, %, 20°C, 50 Hz, max	I <sub>LEAK</sub> , μA, 20°C, after 5 min., max	ESR*, mOhm, 20°C, 100kHz, max	I <sub>R</sub> , A, 20°C, 100kHz, max		
2.5	1 000	6	25	35	2.2		
	1 500		38				
4	680		27				
	1 000		40				
6.3	470		30			40	2.1
	680		43				
10	330		33	45	2.0		
	470		47				
16	150		24	55	1.7		
	220		35				
20	68		14	75	1.5		
	100		20				
25	33	8.5	70	1.6			
	47	12					
32	22	7.5	95	1.3			

\* ESR is allowed to increase by up to 1.25 times after mounting

## CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, $t_\lambda$ , hours	Capacitor failure rate, $\lambda$ , 1/hour, max
Maximum-permissible mode ( $0.7U_R$ , $T_{env}=125^\circ\text{C}$ )	25 000	$10^{-6}$
Maximum-permissible mode ( $U_R$ , $T_{env}=85^\circ\text{C}$ )		
Light mode ( $0.6U_R$ , $T_{env}=55^\circ\text{C}$ )	150 000	$10^{-8}$
Light mode ( $0.5U_R$ , $T_{env}=45^\circ\text{C}$ )	300 000	$10^{-9}$
Storageability Gamma-rated time of capacitor storageability $T_{cy}$ at $\gamma=99.5\%$ , years, min	25	

## VOLTAGE VERSUS TEMPERATURE



## EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K53-72 "E" – 25V –  $33\mu\text{F} \pm 20\%$  AZHYAR.673546.008 TU