

K50-68

ALUMINUM ELECTROLYTIC CAPACITOR

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EVAYA.673541.003 TU
AZHYAR.673541.005 TU



They are produced with radial wire leads, as well as with fixing pins and self-locking leads. They are used in the creation of special equipment, audio and video equipment, automotive industry, etc. In addition to the standard version, it includes high-voltage and non-polar groups.

Capacitors are suitable for application in direct current, ripple current and pulse current circuits. Capacitors are produced in all climate version and temperate/cold climate version.

It is recommended to use this capacitor type as substitution for capacitors K50-35, K50-38, K50-6 types.

MAIN PARAMETERS

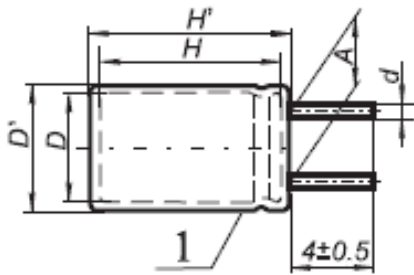
Name	Value
Rated voltage, V	6.3...450
Rated capacitance, μF	1...15 000
Capacitance tolerance (25 °C, 50 Hz), %	+50...-10; ± 20
Maximum operating temperature T_{env} , °C	+85
Minimal operating temperature T_{env} , °C	-40

DISSIPATION FACTOR TABLE

U_R, V	$\text{tg } \delta, \%, 25 \text{ }^\circ\text{C}, 50 \text{ Hz, max}$			
	EVAYA.673.541.003 TU		AZHYAR.673.541.005 TU	
	Polar	Nonpolar	Polar	Nonpolar
6.3	40		30	
16	30	30	20	30
25	30		20	
40; 63	20		15	
50		20		20
100; 160	15		15	
250...450	10		10	

CAPACITORS WITH SHORT LEADS, WITH PREFORMED LEADS, STANDARD

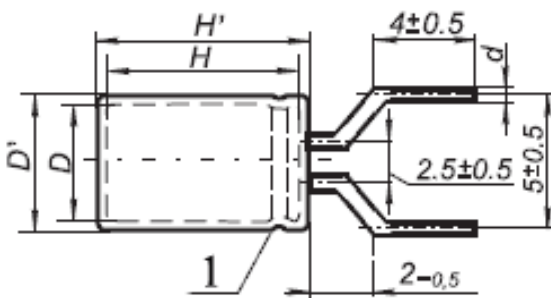
Fig. 1



With short leads

- 1 – Isolation sleeve
- 2 – Positive terminal

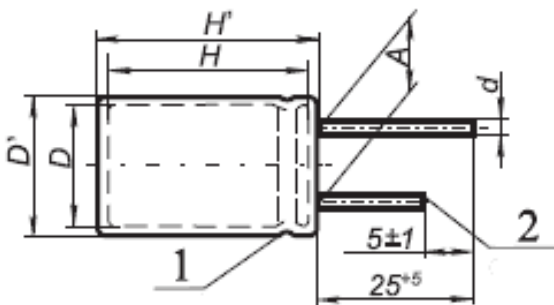
$D' = D + 1 \text{ max, mm}$
 $H' = H + 2 \text{ max, mm}$



With short leads

Explosion proof valve with $\varnothing 12$ mm and more is on the case bottom.

Capacitors with negative terminal length 16^{+4} mm are available according to consumer consent, in this case positive terminal length is 3mm shorter.



Standard

D	A ± 0.5	d ± 0.1
5...8	2.5	0.5
10	5	0.6
12...14	5	0.6
16...21	7.5	0.8
25...32	12.5	0.8

CAPACITORS DIMENSIONS AND MASS

FIG.1

U _R , V	6.3	16	25	40	63	100	160	250	315	350	400	450
C _R , μF	D×H, mm mass, g											
1							<u>5x11</u> 0.55					
2.2						<u>5x11</u> 0.55	<u>6.3x14</u> 1					
3.3						<u>5x11</u> 0.55						
4.7		<u>5x11</u> 0.55				<u>6.3x12</u> 0.8	<u>8x14</u> 1.4					
10					<u>5x11</u> 0.55	<u>6.3x14</u> 1.4	<u>10x18</u> 3.1	<u>12x16</u> 4	<u>12x19</u> 4.5		<u>14x24</u> 7	<u>14x24</u> 7
22			<u>5x11</u> 0.55	<u>6.3x12</u> 0.8	<u>6.3x14</u> 1	<u>10x12</u> 2.4	<u>14x19</u> 5.5	<u>14x19</u> 5.5	<u>14x24</u> 7	<u>16x25</u> 10	<u>16x30</u> 12	<u>18x42</u> 21
33		<u>5x11</u> 0.55									<u>18x47</u> 23	
47	<u>5x11</u> 0.55	<u>6.3x12</u> 0.8	<u>6.3x12</u> 0.8	<u>8x12</u> 1.2	<u>10x12</u> 2.4	<u>10x18</u> 3.1	<u>16x25</u> 10	<u>16x30</u> 12	<u>18x30</u> 15	<u>18x35</u> 17	<u>18x47</u> 23	<u>18x47</u> 25
100	<u>6.3x12</u> 0.8	<u>8x12</u> 1.2	<u>8x14</u> 1.4	<u>10x12</u> 2.4	<u>10x18</u> 3.1	<u>14x19</u> 5.5	<u>18x25</u> 17	<u>18x45</u> 23	<u>18x45</u> 23	<u>21x52</u> 35		
220	<u>8x14</u> 1.4	<u>10x12</u> 2.4	<u>10x15</u> 3.0	<u>10x18</u> 3.1	<u>14x19</u> 5.5	<u>16x25</u> 10		<u>21x47</u> 33				
330			<u>12x19</u> 4.5	<u>14x19</u> 5.5								
470	<u>10x12</u> 2.4	<u>10x18</u> 3.1	<u>12x19</u> 4.5	<u>14x19</u> 5.5	<u>16x25</u> 10	<u>18x35</u> 17						
1 000	<u>12x19</u> 4.5	<u>14x19</u> 5.5	<u>14x24</u> 7	<u>16x25</u> 10	<u>18x35</u> 17	<u>21x47</u> 33						
2 200	<u>14x24</u> 7	<u>16x25</u> 10	<u>18x30</u> 15	<u>18x40</u> 21	<u>21x47</u> 33							
4 700	<u>16x30</u> 12	<u>18x35</u> 17	<u>21x42</u> 30	<u>21x47</u> 33								
10 000	<u>18x45</u> 23	<u>21x42</u> 30										
15 000	<u>21x47</u> 33											

* 10 mm A-size is available according to consumer consent

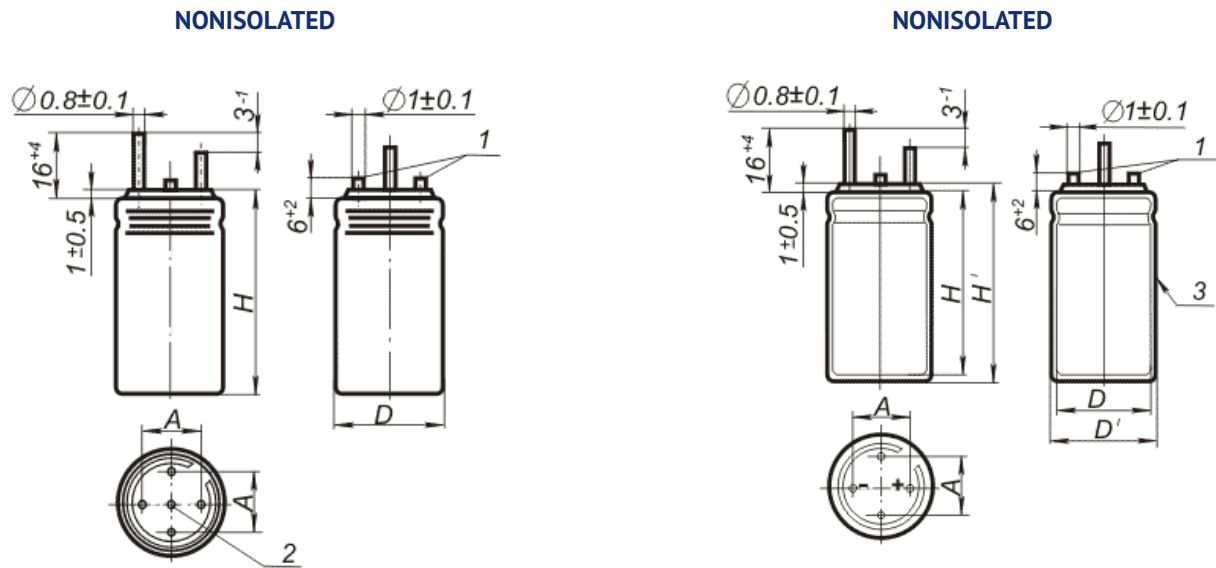
250V x 10μF rated capacitors are available in dimensions $\frac{10 \times 18}{3.1}$

450V x 47μF rated capacitors are available in dimensions $\frac{21 \times 42}{24.5}$

250V x 220μF rated capacitors are available in dimensions $\frac{21 \times 54}{35.0}$

CAPACITORS WITH MOUNTING PINS

Fig. 2



Explosion proof valve can be on the case bottom.

1 – Mounting pins 2 – Explosion-proof valve 3 – Isolation sleeve

For D = 25 mm A = 12.5 mm
For D = 32 mm A = 20 mm

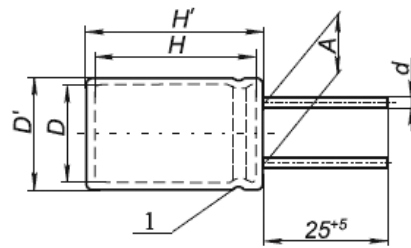
CAPACITORS DIMENSIONS AND MASS

FIG. 2

U _R , V	160	250	315	350	400	450
C _R , μF	<u>DxH, mm</u> mass, g					
100					<u>25x50</u> 41	<u>25x55</u> 45
150					<u>25x50</u> 45	
220			<u>25x55</u> 45	<u>32x45</u> 65	<u>32x55</u> 74	<u>32x60</u> 80
330		<u>32x50</u> 77			<u>32x70</u> 94	<u>32x70</u> 94
470	<u>25x50</u> 41	<u>32x55</u> 74	<u>32x67</u> 90			
1 000	<u>32x67</u> 90					

NONPOLAR CAPACITORS

Fig. 3



1 – Isolation sleeve

D	A ± 0.5	d ± 0.1
6.3...8	2.5	0.5
10	5	0.6

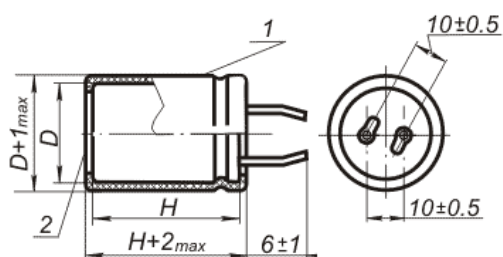
$$H' = H + 2 \text{ max}$$

$$D' = D + 1 \text{ max}$$

U _R , V	16	50
C _R , μF	<u>DxH, mm</u> mass, g	
2.2		<u>6.3x12</u> 0.85
4.7	<u>6.3x12</u> 0.85	<u>6.3x12</u> 0.85
10	<u>6.3x12</u> 0.85	<u>8x14</u> 1.4
22	<u>6.3x12</u> 0.85	<u>10x12</u> 2.4

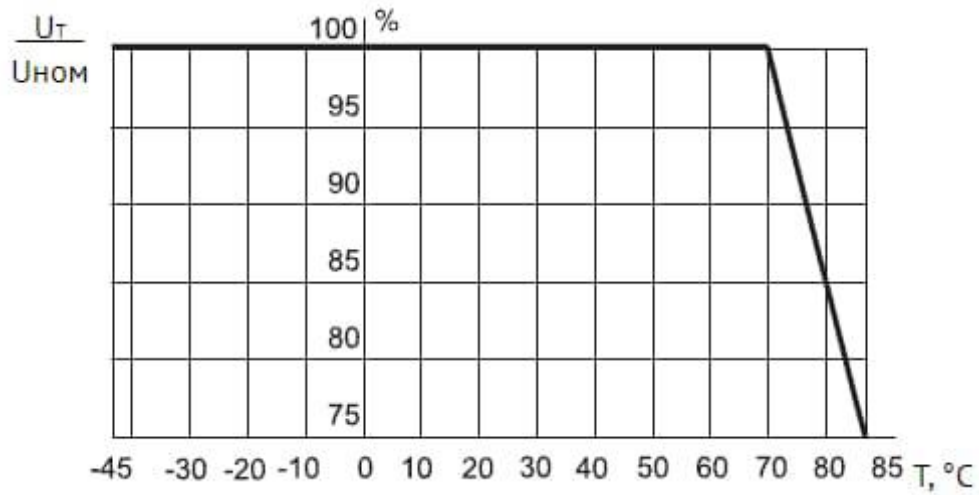
SNAP-IN CAPACITORS (EVAYA. 673.541.003 TU ONLY)

Fig. 4



U _R , V	350	385	400
C _R , μF	<u>DxH, mm</u> mass, g		
100	<u>21x54</u> 41	<u>25x50</u> 45	<u>25x50</u> 45
220	<u>32x45</u> 65	<u>32x50</u> 72	<u>32x50</u> 80

VOLTAGE VERSUS TEMPERATURE



CAPACITORS RELIABILITY

Modes and operating conditions	Minimal nonfailure operating time, t_λ , hours	Capacitor failure rate, λ , 1/hour, max
Maximum-permissible mode (U_R , $T_{env}=85\text{ }^\circ C$)	1 000	5×10^{-8}
Maximum-permissible mode (U_R , $T_{env}=70\text{ }^\circ C$)	7 500	
Light mode (U_R , $T_{env}=55\text{ }^\circ C$)	10 000	
Light mode ($0.8U_R$, $T_{env}=55\text{ }^\circ C$)	15 000	
Storageability Gamma-rated time of capacitor storageability T_{cy} at $\gamma=99.5\%$, years, min	15	

CODED SYMBOL FOR CAPACITORS (IDENTIFICATION NUMBER (PARTNUMBER))

CAPACITOR K50-68 – 160V – 1 μ F (\pm 20) % –I– EVAYA.673541.003TU
(K50-68FV-Q-105M-D5H11-PET-003-UHL)

1	1.1	2	3	4	5	6	7	8	9
Capacitor K50-68	F	160V	1 μ F	\pm 20%	D=5mm	H=11mm	PET	EVAYA.673541.003TU	UHL
K50-68	FV	Q	105	M	D5	H11	PET	003	UHL

1. K50-68 – capacitor K50-68

1.1 Design variant

Code	UV	FV	CV
Type of output	with short leads (K)	with molded leads (F)	standard output

2. Rated voltage code

Code	B	E	G	S	K	N	Q	W	X	T	Y	U
U _R , V	6.3	16	25	40	63	100	160	250	315	350	400	450

3. Nominal capacity code

Code	105	255	335	475	106	226	336	476
C _R , μ F	1.0	2.2	3.3	4.7	10	22	33	47

Code	107	227	337	477	108	228	478	109	159
C _R , μ F	100	220	330	470	1000	2200	4700	10000	15000

4. Capacity approval code

Code	M	T
Admittance, %	\pm 20	+50; -10

5. Condenser diameter code

Code	D5	D6Z3	D8	D10	D12	D14	D16	D18	D21
Diameter, mm	5	6.3	8	10	12	14	16	18	21

6. Condenser height code

Code	H11	H12	H14	H15	H16	H18	H19	H24
Height, mm	11	12	14	15	16	18	19	24

Code	H25	H30	H35	H40	H42	H45	H47	H52	H54
Height, mm	25	30	35	40	42	45	47	52	54

7. Isolation code

Code	Decryption
PET	Isolated, packed in a box for manual assembly of equipment
PET-0	Uninsulated, packed in a box for manual assembly of equipment

8. Code TU

Code	TU designation
003	EVAYA.673541.003 TU

9. Climatic performance

Code	Decryption
B	Capacitors designed for interior installation with resistance requirements to high air humidity 98% at 35°C
UHL	Capacitors are designed for interior installation with resistance requirements to high air humidity 98% at 25°C (climatic version UHL)

**CAPACITOR K50-68 – 400V – 100µF (±20) % –I– EVAYA.673541.003 TU
(K50-68B -Y- 107M-D25H50-PET-003-UHL)**

1	2	3	4	5	6	7	8	9
Capacitor K50-68	400V	100µF	±20%	D=25mm	H=50mm	PET	EVAYA.673541.003 TU	UHL
K50-68	Y	107	M	D25	H50	PET	003	UHL

1. K50-68 – capacitor K50-68

2. Rated voltage code

Code	Q	W	X	T	Y	U
Ur, V	160	250	315	350	400	450

3. Nominal capacity code

Code	107	157	227	337	477	108
Cr, µF	100	150	220	330	470	1000

4. Capacity approval code

Code	M	T
Admittance, %	±20	+50; -10

5. Condenser diameter code

Code	D25	D32
Diameter, mm	25	32

6. Condenser height code

Code	H45	H50	H55	H60	H67	H70
Height, mm	45	50	55	60	67	70

7. Isolation code

Code	Decryption
PET	Isolated, packed in a box for manual assembly of equipment
PET-0	Uninsulated, packed in a box for manual assembly of equipment

8. Code TU

Code	TU designation
003	EVAYA.673541.003 TU

9. Climatic performance

Code	Decryption
B	Capacitors designed for interior installation with resistance requirements to high air humidity 98% at 35°C
UHL	Capacitors are designed for interior installation with resistance requirements to high air humidity 98% at 25°C (climatic version UHL)

**CAPACITOR K50-68 – 350V – 100 μ F (\pm 20) % –I– EVAYA.673541.003 TU
(K50-68S-T-107M-D21H54-PET-003-UHL)**

1	1.1	2	3	4	5	6	7	8	9
Capacitor K50-68	C	350V	100 μ F	\pm 20%	D=21mm	H=54mm	PET	EVAYA.673541.003 TU	UHL
K50-68	S	T	107	M	D21	H54	PET	003	UHL

1. K50-68 – capacitor K50-68

1.1 Design variant

Code	S
Type of output	self-locking terminal (C)

2. Rated voltage code

Code	T	T85	Y
U_R, V	350	385	400

3. Nominal capacity code

Code	107	227
C_R, μF	100	220

4. Capacity approval code

Code	M	T
Admittance, %	\pm 20	+50; -10

5. Condenser diameter code

Code	D21	D25	D32
Diameter, mm	21	25	32

6. Condenser height code

Code	H45	H50	H54
Height, mm	45	50	54

7. Isolation code

Code	Decryption
PET	Isolated, packed in a box for manual assembly of equipment
PET-0	Uninsulated, packed in a box for manual assembly of equipment

8. Code TU

Code	TU designation
003	EVAYA.673541.003 TU

9. Climatic performance

Code	Decryption
B	Capacitors designed for interior installation with resistance requirements to high air humidity 98% at 35°C
UHL	Capacitors are designed for interior installation with resistance requirements to high air humidity 98% at 25°C (climatic version UHL)

**CAPACITOR K50-68 – 16V – 4,7μF (±20) % – I – EVAYA.673541.003 TU
(K50-68-E-475M- D6Z3H12-PET-003-UHL-NP)**

1	2	3	4	5	6	7	8	9	10
Capacitor K50-68	16V	4.7μF	±20%	D=6.3mm	H=12mm	PET	EVAYA.673541.003 TU	UHL	Non-polar
K50-68	T	475	M	D6Z3	H12	PET	003	UHL	Np

1. K50-68 – capacitor K50-68

2. Rated voltage code

Code	E	J
U_R, V	16	50

3. Nominal capacity code

Code	225	475	106	226
C_R, μF	2.2	4.7	10	22

4. Capacity approval code

Code	M	T
Admittance, %	±20	+50; -10

5. Condenser diameter code

Code	D6Z3	D8	D10
Diameter, mm	6.3	8	10

6. Condenser height code

Code	H12	H14
Height, mm	12	14

7. Isolation code

Code	Decryption
PET	Isolated, packed in a box for manual assembly of equipment

8. Code TU

Code	TU designation
003	EVAYA.673541.003 TU

9. Climatic performance

Code	Decryption
B	Capacitors designed for interior installation with resistance requirements to high air humidity 98% at 35°C
UHL	Capacitors are designed for interior installation with resistance requirements to high air humidity 98% at 25°C (climatic version UHL)

10. View of the capacitor

Code	Decryption
Np	non-polar

EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K50-68 – 6.3V – 100µF ±20% B F AZHYAR.673541.005 TU

CAPACITOR K50-68N – 16V – 10µF ±20% B AZHYAR.673541.005 TU

CAPACITOR K50-68 – 160V – 1µF ±20% B EVAYA.673541.003 TU

Please indicate the capacitor dimensions while ordering capacitors 160Vx100µF and 450Vx47µF.

Example:

CAPACITOR K50-68 – 160V – 100µF ±20% B AZHYAR.673541.005 TU Ø18x25