SUPERCAPACITOR

K58-29

SPECIAL PURPOSES

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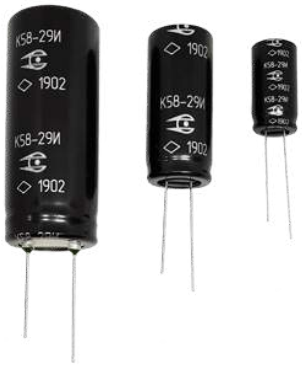


AZHYAR.673623.007 TU

Commercially produced capacitors. Available to order.

APPLICATION

- Maintaining of the equipment operation when voltage depression occurs;
- Safely shutdown of machineries;
- Maintaining "a bridge" when switching between the power supplies;
- Providing high discharging current in the equipment;
- Rapid electrical energy accumulation and further providing to the grid;
- Providing temporary electricity power for equipment while operating in autonomous mode;
- As an energy storage device in difficult remote equipment;
- As an power supply in single-use system;
- To improve the operational reliability of the equipment;
- Are used together with chemical and other current sources to extend the service life;

MAIN PARAMETERS

Name	Value
Rated voltage, V	2.7
Rated capacitance, F	1; 3; 5; 10; 15; 25; 50; 100; 200
Capacitance tolerance, %	+50...-20; ±20
Maximum operating temperature Tenv, °C	65
Minimal operating temperature Tenv, °C	-60
Maximum-permissible overvoltage, V	2.85

DIMENSIONAL DRAWING OF CAPACITOR

Figure 1

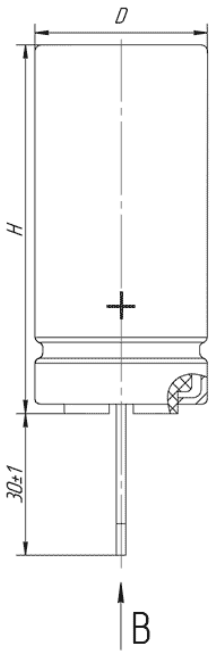
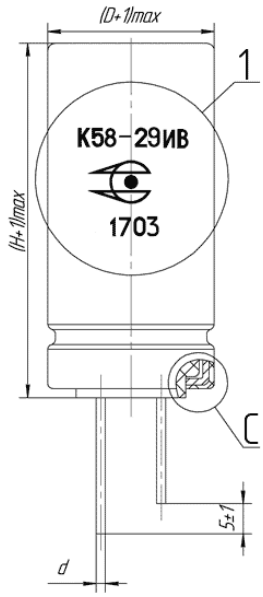
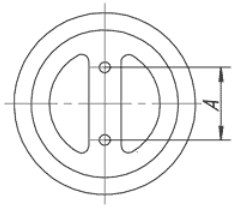


Figure 2
(also see fig. 1)



View B
(lid version 1)



View B
(lid version 2)

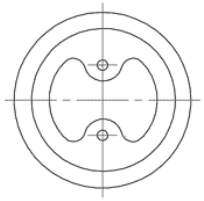


Figure 3

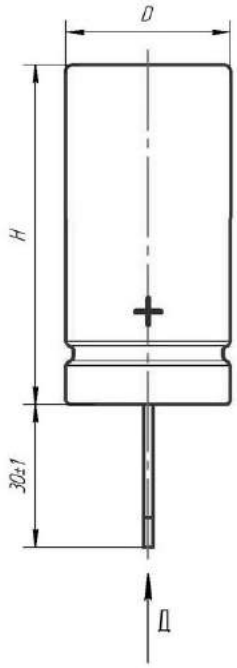
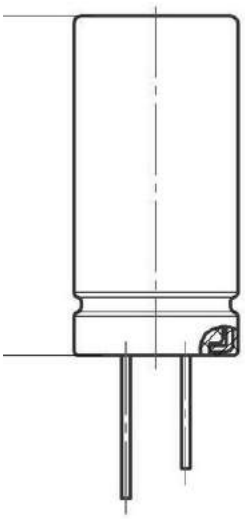


Figure 4
(also see fig. 2)



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(lid version 3)

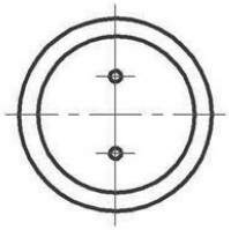


Figure 5

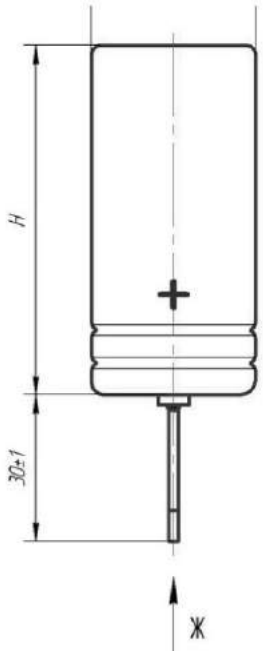
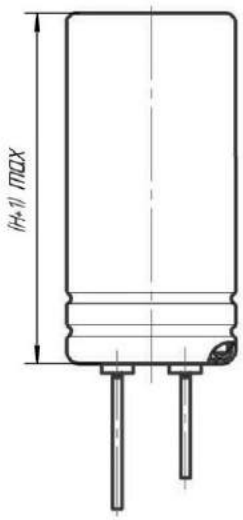


Figure 6

(also see fig. 1)



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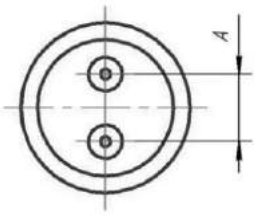

CAPACITORS OVERALL DIMENSIONS AND MASS

U_R, V	C_R, F	Size DxH, mm	d, mm	A, mm	Mass, g	Lid version	Figure
2.7	1	6.3x14	0.6	2.3	2.5	2	1, 2, 3, 4
2.7	1	8x13	0.6	3.5	2.5	2, 3	1, 2, 3, 4
2.7	3	8x20	0.6	3.5	3.5	2, 3	1, 2, 3, 4
2.7	5	10x20	0.6	5	4.5	1	1, 2, 3, 4
2.7	10	10x30	0.6	5	6.5	1	1, 2, 3, 4
2.7	15	12.5x25	0.6	5	10.5	1	1, 2, 3, 4
2.7	25	16x25	0.8	7.5	15	1, 3	1, 2, 3, 4
2.7	50	18x40	0.8	7.5	25	1, 3	1, 2, 3, 4
2.7	100	20x40	0.8	10	45	1, 3	1, 2, 3, 4
2.7	200	25x60	1	12.5	90	-	5, 6

CASE PROTECTION

Climatic version	Lacquer coating	Jacketing with insulating tube	Design variant
Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 25°C	-	-	1, 3, 5
Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 25°C	-	+	2, 4, 6
Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 35°C	+	-	2, 4, 6
Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 35°C	+	+	2, 4, 6

CAPACITOR ELECTRIC PARAMETERS VALUE

U_R, V	C_R, F	Size DxH, mm	I_{LEAK}, μA T=25°C, 72h	ESR_{DC}, MOhm T=25°C	Maximum charging and discharging current, A (discharge within 1sec. from U_R to ½U_R)	Stored energy, Wh	Specific stored energy, Wh/kg	Specific output, W/kg
2.7	1	6.3x14	15	400	0.5	0.001	0.41	874.8
2.7	1	8x13	15	400	0.5	0.001	0.41	874.8
2.7	3	8x20	15	110	1.5	0.003	0.87	2272.21
2.7	5	10x20	23	90	2.5	0.005	1.13	2160
2.7	10	10x30	38	70	5	0.010	1.56	1922.64
2.7	15	12.5x25	60	85	6.5	0.015	1.45	980.17
2.7	25	16x25	98	54	8.5	0.025	1.69	1080
2.7	50	18x40	240	32	10.1	0.051	2.03	1093.5
2.7	100	20x40	300	30	12.5	0.101	2.25	648
2.7	200	25x60	1 050	24	14	0.203	2.25	405

CAPACITORS RELIABILITY

Reliability Operation modes	t_λ, hours	t_λ, cycles	λ, 1/hour, max
Maximum-permissible mode (U_R, Tenv=65°C)	1 500		$5x10^{-5}$
Maximum-permissible mode (charge to UR, discharge to ½UR, Tenv=65°C)		30 000	$3x10^{-6}$
Typical operating mode (U_R, Tenv=25°C)	30 000		$3x10^{-6}$
Typical operating mode (charge to UR, discharge to ½UR, Tenv=25°C)		500 000	$3x10^{-7}$

Gamma-rated time of capacitor storageability Tcy at y=95%, 25 years

EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K58-29 – 2.7V – 1F (+50-20)% (6.3×14) AZHYAR.673623.007 TU
CAPACITOR K58-29 – 2.7V – 1F (+50-20)% – (8×13) – I AZHYAR.673623.007 TU
CAPACITOR K58-29 – 2.7V – 25F (+50-20)% – (16×25) – B AZHYAR.673623.007 TU
CAPACITOR K58-29 – 2.7V – 200F ±20% – (25×60) – IB AZHYAR.673623.007 TU