

Aluminum electrolytic capacitors

Single-ended capacitors

Series/Type:	B43891
Status:	In development
Date:	February 2026



This series is not yet released for mass production and subject to change. The products delivered are engineering samples, prototypes or pre-series products, which are not intended for commercial use in series products of the purchaser. The supplier assumes no warranty or liability. Any use is at the sole risk of the purchaser.



Single-ended capacitors	B43891
Long useful life - 105 °C	

In development

Specifications and characteristics in brief

Rated voltage V_R	450 V DC			
Surge voltage V_S	$1.1 \cdot V_R$			
Rated capacitance C_R	82 ... 160 μ F			
Capacitance tolerance	$\pm 20\% \triangleq M$			
Dissipation factor $\tan \delta$ (20 °C, 120 Hz)	≤ 0.24			
Leakage current I_{leak} (20 °C, 5 min)	$I_{leak} \leq 0.03 \mu A \cdot \left(\frac{C_R}{\mu F} \cdot \frac{V_R}{V} \right) + 15 \mu A$			
Self-inductance ESL	Diameter (mm)	16	18	
	Approx. ESL (nH)	26	34	
Useful life ^{1),2)} 105 °C; V_R ; $I_{AC,R}$	> 10000 h		Requirements: $ \Delta C/C \leq 20\%$ of initial value $\tan \delta \leq 3$ times initial specified limit $I_{leak} \leq$ initial specified limit	
Voltage endurance test 105 °C; V_R	3000 h		Post test requirements: $ \Delta C/C \leq 15\%$ of initial value $\tan \delta \leq 1.5$ times initial specified limit $I_{leak} \leq$ initial specified limit	
Vibration resistance test	To IEC 60068-2-6:2007, test Fc: Frequency range 10 Hz ... 2 kHz, displacement amplitude max. 1.5 mm, acceleration max. 20 g, duration 3 $\times$ 2 h. Capacitor rigidly clamped by the aluminum case e.g. using our standard fixture.			
Characteristics at low temperature	Max. impedance ratio at 120 Hz	V_R (V DC)		450 V
		$Z_{-25\text{ °C}} / Z_{20\text{ °C}}$		6
		$Z_{-40\text{ °C}} / Z_{20\text{ °C}}$		10
IEC climatic category	To IEC 60068-1:2013: 40/105/56 (–40 °C/+105 °C/56 days damp heat test)			
Sectional specification ³⁾	IEC 60384-4:2016			

1) Refer to chapter "General technical information, 5 Useful life" on how to interpret useful life.

2) Useful life specification shall apply for capacitors subjected to DC voltage with the rated ripple current (the peak voltage shall not exceed the rated voltage).

3) Refer to chapter "General technical information, 2 Standards and specifications" for further details.

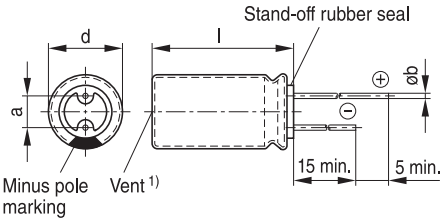
Single-ended capacitors

Long useful life - 105 °C

B43891

In development

Dimensional drawing
With stand-off rubber seal
 Diameters (mm): 16, 18



¹⁾ Supplied components may have different vent designs.
 They all offer the same functionality of pressure relief.
 KAL1961-Q-E

Dimensions and weights

Dimensions (mm)				Approx. weight
d +0.5	l +2	a ±0.5	b	g
16	31.5	7.5	0.80 ±0.05	11
16	35.5	7.5	0.80 ±0.05	13
16	40	7.5	0.80 ±0.05	15
18	31.5	7.5	0.80 ±0.1	15
18	35	7.5	0.80 ±0.1	16
18	40	7.5	0.80 ±0.1	18

Overview of available types

Other voltage and capacitance ratings are available upon request.

V _R (V DC)	450
	Case dimensions d × l (mm)
C _R (µF)	
82	16 × 31.5
100	16 × 35.5
110	18 × 31.5
120	16 × 40
130	18 × 35
160	18 × 40

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Technical data and ordering codes

C_R 120 Hz 20 °C μF	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C mA	Ordering code (composition see below)
$V_R = 450 V$ DC			
82	16 × 31.5	650	B43891A5826M***
100	16 × 35.5	750	B43891A5107M***
110	18 × 31.5	800	B43891A5117M***
120	16 × 40	860	B43891A5127M***
130	18 × 35	920	B43891A5137M***
160	18 × 40	980	B43891A5167M***

Composition of ordering code

*** = Version

- 000 = for standard leads, bulk
- 001 = for kinked leads, bulk
- 002 = for cut leads, bulk
- 003 = for crimped leads, blister
- 004 = for J leads, blister
- 009 = for taped leads, Ammo pack, lead spacing $F = 7.5$ mm
(for $d \times l = 16 \times 31.5$ mm and 18×31.5 mm)
- 012 = for bent 90° leads, blister (for $\varnothing 16 \dots 18$ mm)

Useful life¹⁾

Calculations of useful life are performed on request, based on operational conditions stated by the customer.

1) Refer to chapter "General technical information, 5 Useful life" on how to interpret useful life.

In development

Taping

Single-ended capacitors are available taped in Ammo pack from diameter 8 to 18 mm as follows:

Lead spacing $F = 3.5 \text{ mm}$ ($\varnothing d = 8 \text{ mm}$)

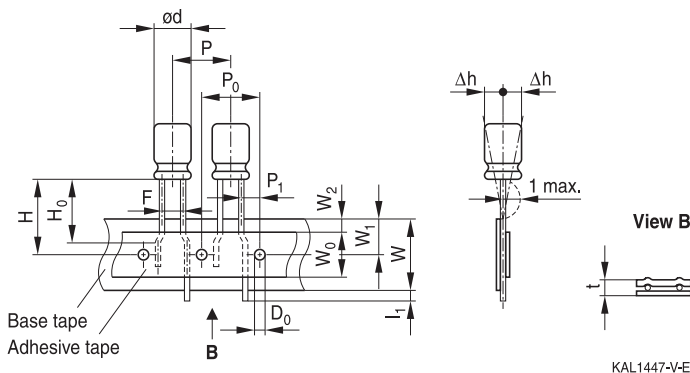
Lead spacing $F = 5.0 \text{ mm}$ ($\varnothing d = 8 \dots 12.5 \text{ mm}$)

Lead spacing $F = 7.5 \text{ mm}$ ($\varnothing d = 16 \dots 18 \text{ mm}$).

The dimensions for F , P_1 and l_1 max. are specified with reference to the center of the terminal wires.

Lead spacing 3.5 mm ($\varnothing d = 8 \text{ mm}$)

Last 3 digits of ordering code: 006



Dimensions in mm

$\varnothing d$	F	H	W	W_0	W_1	W_2	P	P_0	P_1	l_1	t	Δh	D_0
8	3.5	18.5	18	9.5	9.0	3.0	12.7	12.7	4.6	1.0	0.7	1.0	4.0
Tolerance	+0.8 -0.2	± 1.0	± 0.5	min.	± 0.5	max.	± 1.0	± 0.3	± 0.6	max.	± 0.2	max.	± 0.2

Leads can also run straight through the taping area.

Single-ended capacitors

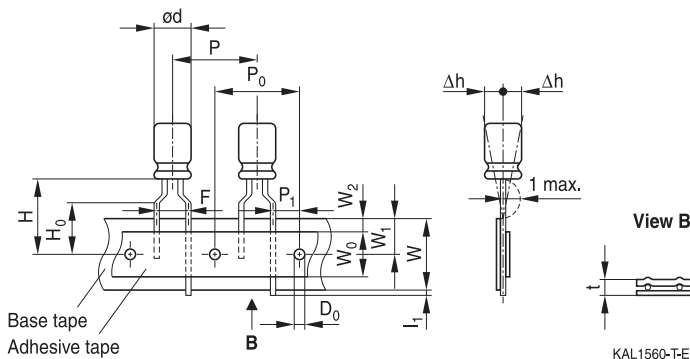
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Long useful life - 105 °C

In development

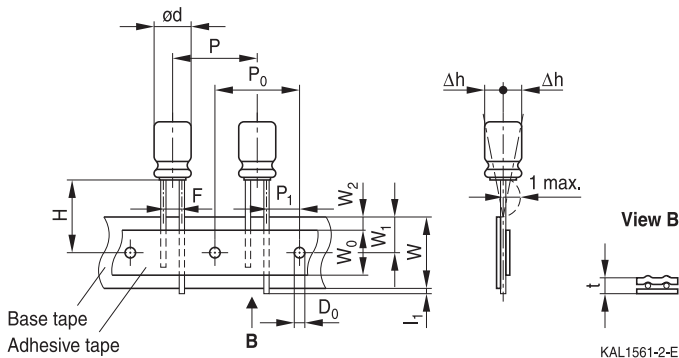
Lead spacing 5.0 mm (Ø d = 8 mm)

Last 3 digits of ordering code: 008



Lead spacing 5.0 mm (Ø d = 10 ... 12.5 mm)

Last 3 digits of ordering code: 008



Dimensions in mm

Ø d	F	H	W	W ₀	W ₁	W ₂	H ₀	P	P ₀	P ₁	L ₁	t	Δh	D ₀
8	5.0	20.0	18	9.5	9.0	1.5	16.0	12.7	12.7	3.85	1.0	0.6	1.0	4.0
10		19.0		9.5			—	12.7	12.7	3.85				
12.5		19.0		11.5			—	15.0	15.0	5.0				
Tolerance	+0.8 -0.2	±0.75	±0.5	min.	±0.5	max.	±0.5	±1.0	±0.2	±0.5	max.	+0.3 -0.2	max.	±0.2

Taping is available up to dimensions d x l = 12.5 x 25 mm.

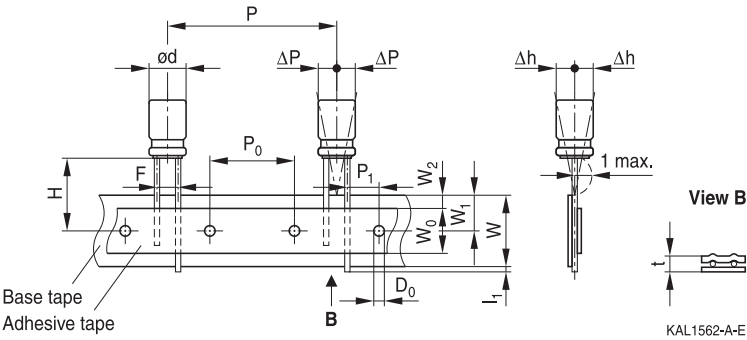
Single-ended capacitors
Long useful life - 105 °C

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In development

Lead spacing 7.5 mm (Ø d = 16 ... 18 mm)

Last 3 digits of ordering code: 009



Dimensions in mm

$\varnothing d$	F	H	W	W_0	W_1	W_2	P	P_0	P_1	I_1	t	ΔP	Δh	D_0
16	7.5	18.5	18.0	12.5	9.0	1.5	30.0	15.0	3.75	1.0	0.7	0	0	4.0
18														
Tolerance	± 0.8	-0.5 $+0.75$	± 0.5	min.	± 0.5	max.	± 1.0	± 0.2	± 0.5	max.	± 0.2	± 1.0	± 1.0	± 0.2

Taping is available up to dimensions $d \times l = 16 \times 31.5 \text{ mm}$ and $18 \times 31.5 \text{ mm}$.

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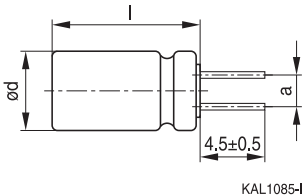
Cut or kinked leads

Single-ended capacitors are available with cut or kinked leads.
Other lead configurations also available upon request.

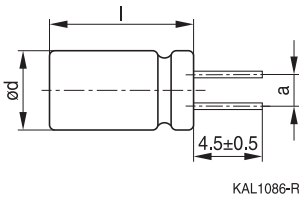
Cut leads

Last 3 digits of ordering code: 002

With stand-off rubber seal



With flat rubber seal



Case size d x l (mm)	Dimensions (mm) a ±0.5
10 x 12.5	5.0
10 x 16	5.0
10 x 20	5.0
12.5 x 20	5.0
12.5 x 25	5.0
16 x 20	7.5
16 x 25	7.5
16 x 31.5	7.5
16 x 35.5	7.5
16 x 40	7.5
18 x 20	7.5
18 x 25	7.5
18 x 31.5	7.5
18 x 35	7.5
18 x 40	7.5

Single-ended capacitors
Long useful life - 105 °C

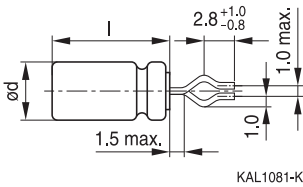
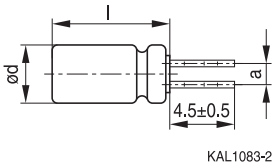
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In development

Kinked leads

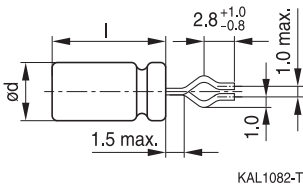
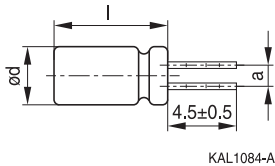
Last 3 digits of ordering code: 001

With stand-off rubber seal



Case size d x l (mm)	Dimensions (mm) a ±0.5
10 x 20	5.0
12.5 x 20	5.0
12.5 x 25	5.0
16 x 20	7.5
16 x 25	7.5
16 x 31.5	7.5
16 x 35.5	7.5
18 x 20	7.5
18 x 25	7.5
18 x 31.5	7.5
18 x 35	7.5
18 x 40	7.5

With flat rubber seal



In development

PAPR leads (Protection Against Polarity Reversal)

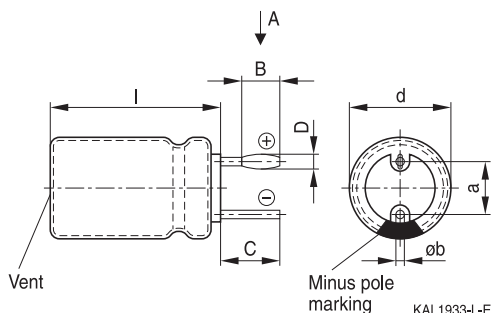
These lead configurations ensure correct placement of the capacitor on the PCB with regard to polarity. PAPR leads are available for diameters from 10 mm up to 18 mm.

There are three configurations available: Crimped leads, J leads, bent 90° leads.

Crimped leads

Last 3 digits of ordering code: 003

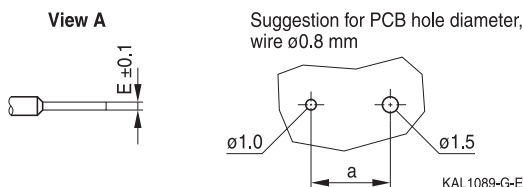
With stand-off rubber seal



The series B41868, B41897, B41898 and B41899 have no sleeve.

In these series the pole is marked on the aluminum case instead. Refer to the series data sheet for details.

Suggestion for PCB hole diameter



Case size d x l (mm)	Dimensions (mm)					
	B ±0.2	C ±0.5	D ±0.1	E ±0.1	a ±0.5	Ø b
16 x 20	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
16 x 25	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
16 x 31.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
16 x 35.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
18 x 20	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 x 25	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 x 31.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 x 35	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 x 40	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1

Single-ended capacitors

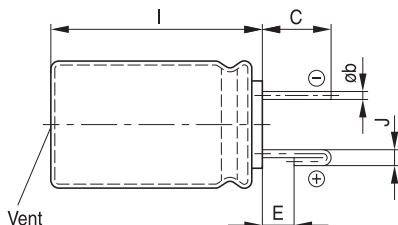
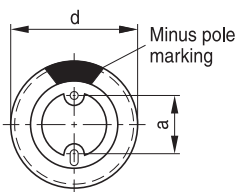
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Long useful life - 105 °C

In development

J leads

Last 3 digits of ordering code: 004



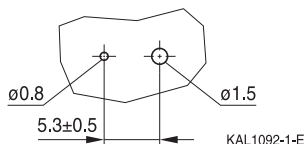
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The series B41868, B41897, B41898 and B41899 have no sleeve.

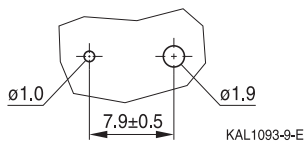
In these series the pole is marked on the aluminum case instead. Refer to the series data sheet for details.

Suggestion for PCB hole diameter

Suggestion for PCB hole diameter,
wire $\varnothing 0.6$ mm



Suggestion for PCB hole diameter,
wire $\varnothing 0.8$ mm

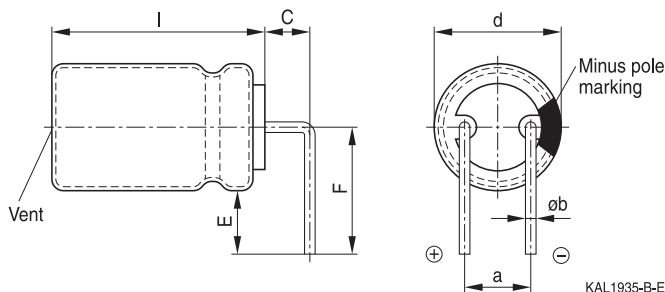


Case size d x l (mm)	Dimensions (mm)				
	C ±0.5	E ±0.5	J ±0.2	a ±0.5	Ø b
10 x 12.5	3.2	0.7	1.2	5.0	0.6 ±0.05
10 x 16	3.2	0.7	1.2	5.0	0.6 ±0.05
10 x 20	3.2	0.7	1.2	5.0	0.6 ±0.05
12.5 x 20	3.2	0.7	1.2	5.0	0.6 ±0.05
12.5 x 25	3.2	0.7	1.2	5.0	0.6 ±0.05
16 x 20	3.5	0.7	1.6	7.5	0.8 ±0.05
16 x 25	3.5	0.7	1.6	7.5	0.8 ±0.05
16 x 31.5	3.5	0.7	1.6	7.5	0.8 ±0.05
16 x 35.5	3.5	0.7	1.6	7.5	0.8 ±0.05
16 x 40	3.5	0.7	1.6	7.5	0.8 ±0.05
18 x 20	3.5	0.7	1.6	7.5	0.8 ±0.1
18 x 25	3.5	0.7	1.6	7.5	0.8 ±0.1
18 x 31.5	3.5	0.7	1.6	7.5	0.8 ±0.1
18 x 35	3.5	0.7	1.6	7.5	0.8 ±0.1

In development

Bent 90° leads for horizontal mounting pinning

Last 3 digits of ordering code: 012



The series B41868, B41897, B41898 and B41899 have no sleeve.

In these series the pole is marked on the aluminum case instead. Refer to the series data sheet for details.

Case size d x l (mm)	Dimensions (mm)				
	C ±0.5	E ±0.5	F ±0.5	a ±0.5	Ø b
16 x 20	4.0	4.0	12.0	7.5	0.8 ±0.05
16 x 25	4.0	4.0	12.0	7.5	0.8 ±0.05
16 x 31.5	4.0	4.0	12.0	7.5	0.8 ±0.05
16 x 35.5	4.0	4.0	12.0	7.5	0.8 ±0.05
16 x 40	4.0	4.0	13.0	7.5	0.8 ±0.05
18 x 20	4.0	4.0	13.0	7.5	0.8 ±0.1
18 x 25	4.0	4.0	13.0	7.5	0.8 ±0.1
18 x 31.5	4.0	4.0	13.0	7.5	0.8 ±0.1
18 x 35	4.0	4.0	13.0	7.5	0.8 ±0.1
18 x 40	4.0	4.0	13.0	7.5	0.8 ±0.1

Bent leads for diameter 12.5 mm available upon request.

Single-ended capacitors

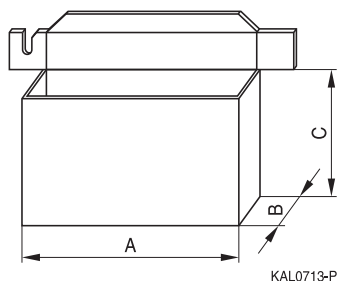
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Long useful life - 105 °C

In development

Packing units and box dimensions

Ammo pack



Case size d x l (mm)	Dimensions (mm)			Packing units (pcs.)
	A _{max}	B _{max}	C _{max}	
8 x 11.5	345	60	240	1000
10 x 12.5	345	60	280	750
10 x 16	345	65	200	500
10 x 20	345	65	200	500
12.5 x 20	345	65	260	500
12.5 x 25	345	70	260	500
16 x 20	325	65	285	300
16 x 25	325	65	285	300
16 x 31.5	325	80	275	300
18 x 20	325	65	285	250
18 x 25	325	65	285	250
18 x 31.5	325	80	275	250

Single-ended capacitors

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Long useful life - 105 °C

In development

Overview of packing units and code numbers

						PAPR			
Case size d x l	Stan- dard, bulk	Taped, Ammo pack			Kinked leads, bulk	Cut leads, bulk	Crimped leads, blister	J leads, blister	Bent 90° leads, blister
mm	pcs.	pcs.			pcs.	pcs.	pcs.	pcs.	pcs.
8 x 11.5	1000	1000			—	—	—	—	
10 x 12.5	1000	750			—	1000	—	900	
10 x 16	1000	500			—	1000	—	675	
10 x 20	500	500			500	500	—	500	
12.5 x 20	350	500			350	350	—	300	1)
12.5 x 25	250	500			500	500	—	225	1)
16 x 20	250	300			200	200	200	200	420
16 x 25	250	300			200	200	216	216	216
16 x 31.5	200	300			250	250	180	180	180
16 x 35.5	100	—			100	100	150	150	150
16 x 40	125	—			100	100	72	72	72
18 x 20	175	250			175	175	200	200	420
18 x 25	150	250			150	150	200	200	200
18 x 31.5	100	250			100	100	150	150	150
18 x 35	100	—			100	100	150	150	150
18 x 40	125	—			100	100	72	—	72
The last three digits of the complete ordering code state the lead configuration	000	Code	F (mm)	d (mm)	001	002	003	004	012
		006	3.5	8					
		008	5	8...12.5					
		009	7.5	16...18					

1) Available upon request

Cautions and warnings

Personal safety

The electrolytes used have been optimized both with a view to the intended application and with regard to health and environmental compatibility.

As far as possible, we do not use any dangerous chemicals or compounds to produce operating electrolytes, although in exceptional cases, such materials must be used in order to achieve specific physical and electrical properties because no alternative materials are currently known.

We do, however, restrict the amount of dangerous materials used in our products to an absolute minimum.

Materials and chemicals used in our Aluminum Electrolytic Capacitors and Hybrid Polymer Capacitors are continuously adapted in compliance with the TDK Electronics Corporate Environmental Policy and the latest EU regulations and guidelines such as RoHS, REACH/SVHC, GADSL, and ELV.

MDS (Material Data Sheets) are available on our website for types listed on the product information site of TDK.

MDS for customer specific capacitors are available upon request.

Nevertheless, the following rules should be observed when handling Aluminum Electrolytic Capacitors and Hybrid Polymer Capacitors: No electrolyte should come into contact with eyes or skin. If electrolyte does come into contact with the skin, wash the affected areas immediately with running water. If the eyes are affected, rinse them for 10 minutes with plenty of water. If symptoms persist, seek medical treatment. Avoid inhaling electrolyte vapor or mists. Workplaces and other affected areas should be well ventilated. Clothing that has been contaminated by electrolyte must be changed and rinsed in water.

Product safety

The table below summarizes the safety instructions that must be observed without fail. A detailed description can be found in the relevant sections of separate file chapter “General technical information”.

Topic	Safety information	Reference chapter “General technical information”
Polarity	Make sure that polar capacitors are connected with the right polarity.	1 “Basic construction of aluminum electrolytic capacitors”
Reverse voltage	Voltages of opposite polarity should be prevented by connecting a diode.	3.1.6 “Reverse voltage”
Operating temperature range	Do not exceed the temperature limits specified in the product data sheet. Useful life and reliability depend to a large extent on the capacitor's temperature.	7.1, 7.2 “Minimum and maximum permissible operating temperatures”
Storage	Do not store capacitors at high temperatures or high humidity. Capacitors should be stored at +5 to +35 °C and a relative humidity of $\leq 75\%$.	7.3 “Shelf life and storage conditions”
Mounting of capacitors	The internal and external structure of capacitors might be damaged if excessive force is applied to their terminals. Avoid any compressive, tensile or flexural stress. Do not move the capacitor after soldering to PC board. Do not pick up the PC board by the soldered capacitor. Do not insert the capacitor on the PC board with a hole space different to the lead space specified.	11 “Mounting”
Mounting position of capacitors	The position of the pressure relief device must be taken into consideration when designing the application layout. As a rule, the function of the pressure relief device must not be impaired or blocked by the mounting. Screw terminal capacitors, with pressure relief device in the cover disk, must not be mounted with terminals facing down unless otherwise specified. Multi-pin capacitors with pressure relief device on the can base must not be mounted with terminals facing up unless otherwise specified.	11.1 “Mounting positions of capacitors”

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Long useful life - 105 °C

Topic	Safety information	Reference chapter "General technical information"
Robustness of terminals	Unless otherwise specified, the following maximum tightening torques must not be exceeded when connecting screw terminals: M5: 2.5 Nm M6: 4.0 Nm	11.2 "Mounting torques"
Potting and gluing	If applied, potting and gluing materials must not impair the function of the capacitor's pressure relief device.	11.4 "Potting and gluing"
Soldering	Do not exceed the specified time or temperature limits during soldering.	11.5 "Soldering"
Soldering, cleaning agents	Do not allow halogenated hydrocarbons to come into contact with Aluminum Electrolytic Capacitors or Hybrid Polymer Capacitors.	11.6 "Cleaning agents"
Passive flammability	Avoid external energy, e.g. fire.	8.1 "Passive flammability"
Active flammability	Avoid overload of the capacitors.	8.2 "Active flammability"
Maintenance	Make periodic inspections of the capacitors. Before the inspection, make sure that the power supply is turned off and carefully discharge the capacitors. Do not apply excessive mechanical stress to the capacitor terminals when mounting.	10 "Maintenance"
		Reference chapter "Capacitors with screw terminals"
Breakdown strength of shrinking sleeve	Do not damage the shrinking sleeve, especially when ring clips are used for mounting.	"Screw terminals – accessories"

Display of ordering codes for TDK Electronics products

The ordering code for one and the same product can be represented differently in data sheets, data books, other publications, on the company website, or in order-related documents such as shipping notes, order confirmations and product labels. The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products.

Detailed information can be found on the Internet under www.tdk-electronics.tdk.com/orderingcodes.

Symbols and terms

Symbol	English	German
C	Capacitance	Kapazität
ΔC	Capacitance difference	Kapazitätsdifferenz
C_R	Rated capacitance	Nennkapazität
C_S	Series capacitance	Serienkapazität
$C_{S,T}$	Series capacitance at temperature T	Serienkapazität bei Temperatur T
C_f	Capacitance at frequency f	Kapazität bei Frequenz f
d	Case diameter, nominal dimension	Gehäusedurchmesser, Nennmaß
d_{max}	Maximum case diameter	Maximaler Gehäusedurchmesser
ESL	Self-inductance	Eigeninduktivität
ESR	Equivalent series resistance	Ersatzserienwiderstand
ESR_f	Equivalent series resistance at frequency f	Ersatzserienwiderstand bei Frequenz f
ESR_T	Equivalent series resistance at temperature T	Ersatzserienwiderstand bei Temperatur T
f	Frequency	Frequenz
I	Current	Strom
I_{AC}	Alternating current (ripple current)	Wechselstrom
$I_{AC,RMS}$	Root-mean-square value of alternating current	Wechselstrom, Effektivwert
$I_{AC,f}$	Ripple current at frequency f	Wechselstrom bei Frequenz f
$I_{AC,max}$	Maximum permissible ripple current	Maximal zulässiger Wechselstrom
$I_{AC,R}$	Rated ripple current	Nennwechselstrom
I_{leak}	Leakage current	Reststrom
$I_{leak,op}$	Operating leakage current	Betriebsreststrom
l	Case length, nominal dimension	Gehäuselänge, Nennmaß
l_{max}	Maximum case length (without terminals and mounting stud)	Maximale Gehäuselänge (ohne Anschlüsse und Gewindebolzen)
R	Resistance	Widerstand
R_{ins}	Insulation resistance	Isolationswiderstand
R_{symm}	Balancing resistance	Symmetrierwiderstand
T	Temperature	Temperatur
ΔT	Temperature difference	Temperaturdifferenz
T_A	Ambient temperature	Umgebungstemperatur
T_B	Capacitor base temperature	Temperatur des Gehäusebodens
T_C	Case temperature	Gehäusetemperatur
t	Time	Zeit
Δt	Period	Zeitraum
t_b	Service life (operating hours)	Brauchbarkeitsdauer (Betriebszeit)
V	Voltage	Spannung
V_F	Forming voltage	Formierspannung
V_{op}	Operating voltage	Betriebsspannung
V_R	Rated voltage, DC voltage	Nennspannung, Gleichspannung
V_S	Surge voltage	Spitzenspannung

Single-ended capacitors

B43891

Long useful life - 105 °C

Symbol	English	German
X_C	Capacitive reactance	Kapazitiver Blindwiderstand
X_L	Inductive reactance	Induktiver Blindwiderstand
Z	Impedance	Scheinwiderstand
Z_T	Impedance at temperature T	Scheinwiderstand bei Temperatur T
$\tan \delta$	Dissipation factor	Verlustfaktor
λ	Failure rate	Ausfallrate
ϵ_0	Absolute permittivity	Elektrische Feldkonstante
ϵ_r	Relative permittivity	Dielektrizitätszahl
ω	Angular frequency; $2 \cdot \pi \cdot f$	Kreisfrequenz; $2 \cdot \pi \cdot f$

Note:

All dimensions are given in mm.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule we are either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether a product with the properties described in the product specification is suitable for use in a particular customer application.
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Important notes

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