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# **Aluminum electrolytic capacitors**

Single-ended capacitors

**Series/Type: B41827**, **B43827**Date: December 2010

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# Single-ended capacitors

B41827, B43827

#### Standard series - 85 °C

#### General-purpose grade capacitors

## **Applications**

- General-purpose applications
- Semi-professional to professional application range
- For filtering, coupling and pulse circuits

#### **Features**

- Miniaturized dimensions
- RoHS-compatible
- Useful life of 2000 h at 85 °C

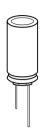
#### Construction

- Radial leads
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on the insulating sleeve
- Case with safety vent from diameter 8 mm

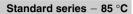
#### **Delivery mode**

- Bulk
- Taped, Ammo pack
- Cut (see chapter "Single-ended Taping, packing and lead configurations, Cut leads (Chapter A)")
- Kinked (see chapter "Single-ended Taping, packing and lead configurations, Kinked leads (Chapter A)")

Refer to chapter "Single-ended capacitors – Taping, packing and lead configurations" for further details.









# Specifications and characteristics in brief

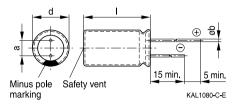
Series	B41827					B43827						
Rated voltage V <sub>R</sub>	6.3 10	00 V E	C			160 450 V DC						
Surge voltage V <sub>S</sub>	$V_R \le 250$	0 V D	C: 1.1	$5 \cdot V_R$	(at ro	om temperature)						
	$V_{R} > 25$	$V_R > 250 \text{ V DC: } 1.1 \cdot V_R \text{ (at room temperature)}$										
Rated capacitance $C_{\text{R}}$	0.47 22000 μF											
Capacitance tolerance	±20% ≙	М				±20%	6 ≙ M					
Dissipation factor (max.)	For capa		ce hig	her th	an 100	)0 μF	add 0	.02 fo	r ever	y incre	ase o	f
(11ax.) (20 °C, 120 Hz)	V <sub>R</sub>	6.3	10	16	25	35	50	63	100	160	350	450
(20 0, 120112)	(V DC)	0.3	10	16	25	35	50	63	100	160		450
	(* 50)									250	400	
	tan δ	0.22	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.18	0.20	0.23
Leakage current I <sub>leak</sub> (20 °C, after	$I_{leak} \le 0.01 \mu A \cdot \left(\frac{C_R}{\mu F} \cdot \frac{V_R}{V}\right)$			2)	$I_{leak} \le 0.03 \mu\text{A} \cdot \left(\frac{C_R}{\mu\text{F}} \cdot \frac{V_R}{V}\right) + 10 \mu\text{A}$							
5 minutes)	or 3 µA, whichever is greater											
Useful life												
85 °C; V <sub>R</sub> ; I <sub>AC,R</sub>	> 2000	h										
Requirements	ΔC/C	≤ ±20	0% of	initial	value							
	$tan \; \delta$	≤ 2 ti	mes ir	nitial s	pecifie	ed val	ue					
	I <sub>leak</sub>	≤init	ial spe	ecified	limit							
Shelf life	After sto	_										
	requirer						_				t: V <sub>R</sub> t	o be
VO. 11	applied					nour	s beto	re me	asure	ment.		
Vibration resistance test						اممام		+	lituda	0 7E *		
	Frequer accelera	•	•			•		ιι απρ	iituue	0.751	11111,	
	1			_				bv th	e leac	ls		
		If can size D <16 mm, capacitor is mounted by the leads  If can size D $\geq$ 16 mm, capacitor rigidly clamped by the aluminum case										
IEC climatic category	To IEC	60068	3-1:									
	$V_R \le 100$	0 V D	C: 40/	085/56	6 (-40	°C/+	85 °C/	/56 da	ys daı	mp he	at test	t)
	$V_{R} > 10$	0 V D	C: 25/	085/56	6 (-25	5 °C/+	85 °C	/56 da	ys da	mp he	at tes	t)





# Standard series - 85 °C

# **Dimensional drawing**

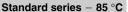


Safety vent for diameter  $\geq$  8 mm.

#### **Case Dimensions**

$d \times I$	$d_{max} \times I_{max}$	а	b
mm	mm	mm	mm
5 ×11	5.5 × 12.5	2.0 ±0.5	0.50 ±0.1
6.3 × 11	6.8 × 12.5	2.5 ±0.5	0.50 ±0.1
8 ×11.5	8.5 × 13.0	3.5 ±0.5	0.60 ±0.1
10 × 12.5	11.0 × 14.0	5.0 ±0.5	0.60 ±0.1
10 × 16	11.0 × 17.5	5.0 ±0.5	0.60 ±0.1
10 × 20	11.0 × 22.0	5.0 ±0.5	0.60 ±0.1
12.5 × 20	13.5 × 22.0	5.0 ±0.5	0.60 ±0.1
12.5 × 25	13.5 × 27.0	5.0 ±0.5	0.60 ±0.1
16 × 25	17.0 × 27.0	7.5 ±0.5	0.80 ±0.1
16 × 31.5	17.0 × 33.5	7.5 ±0.5	0.80 ±0.1
16 × 35.5	17.0 × 37.5	7.5 ±0.5	0.80 ±0.1
18 × 35.5	19.0 × 37.5	7.5 ±0.5	0.80 ±0.1
18 × 40	19.0 × 42.0	7.5 ±0.5	0.80 ±0.1







# Overview of available types - B41827

V <sub>R</sub> (V DC)	6.3	10	16	25
	Case dimensions	d×I (mm)		
C <sub>R</sub> (μF)				
47				5 ×11
100		5 ×11	5 ×11	6.3×11
220	5 ×11	6.3×11	6.3×11	8 × 11.5
330	6.3 × 11	6.3×11	8 × 11.5	10 × 12.5
470	6.3 × 11	8 ×11.5	8 ×11.5	10 × 12.5
1000	10 × 12.5	10 × 12.5	10 × 16	10 × 20
2200	10 ×20	10 × 20	12.5 × 20	12.5 × 25
3300	12.5 × 20	12.5 × 20	12.5 × 25	16 × 25
4700	12.5 × 25	12.5 × 25	16 × 25	16 × 31.5
6800	16 ×25			
10000	16 ×25	16 × 35.5	18 × 35.5	
15000	16 × 35.5	18 × 35.5		
22000	18 × 40			

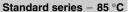




# Standard series - 85 °C

V <sub>R</sub> (V DC)	35	50	63	100
	Case dimensions	d×I (mm)		
C <sub>R</sub> (μF)				
0.47				5 × 11
1.0				5 ×11
2.2				5 ×11
3.3				5 ×11
4.7				5 ×11
10		5 ×11	5 ×11	6.3 × 11
22		5 ×11	6.3×11	8 ×11.5
33	5 ×11	5 ×11	6.3×11	10 × 12.5
47	5 ×11	6.3×11	6.3×11	10 × 12.5
100	6.3×11	8 ×11.5	10 × 12.5	10 × 20
220	10 × 12.5	10 × 12.5	10 × 20	12.5 × 25
330	10 × 12.5	10 × 16	12.5 × 20	16 × 25
470	10 ×16	10 × 20	12.5 × 25	16 × 31.5
1000	12.5 × 25	16 × 20	16 × 31.5	18 × 40
2200	16 × 25	16 × 31.5		
3300	16 × 31.5			
4700	18 × 35.5			







# Overview of available types - B43827

V <sub>R</sub> (V DC)	160	200	250	350	400	450
	Case dimens	sions d×I (mm	1)			
C <sub>R</sub> (μF)						
0.47	5 ×11		5 ×11		6.3 × 11	8 ×11.5
1.0	5 ×11		5 ×11	6.3×11	6.3 × 11	8 ×11.5
2.2	5 ×11		6.3 × 11	8 ×11.5	8 ×11.5	10 × 12.5
3.3	6.3×11	6.3×11	6.3 × 11	10 × 12.5	10 × 12.5	10 × 16
4.7	6.3×11	8 × 11.5	8 ×11.5	10 × 12.5	10 × 16	10 × 20
10	8 ×11.5	10 × 12.5	10 × 12.5	10 × 20	12.5 × 20	12.5 × 20
22	10 × 16	10 × 20	10 × 20	12.5 × 25	16 × 25	16 × 25
33	10 × 20	12.5 × 20	12.5 × 25	16 × 25	16 × 25	16 ×31.5
47	12.5 × 25	12.5 × 20	12.5 × 25	16 × 35.5	16 × 35.5	18 × 40
100	16 × 25	16 × 25	16 × 31.5	18 × 40		
220	16 × 35.5	18 × 35.5				
330	18 × 35.5					





#### Standard series - 85 °C

#### Technical data and ordering codes - B41827

C <sub>R</sub>	Case dimensions	I <sub>AC,R</sub>	Ordering code
120 Hz, 20 °C	d×I	120 Hz, 85 °C	(composition see below)
μF	mm	mA	,
V <sub>R</sub> = 6.3 V DC			
220	5 ×11	200	B41827A2227M***
330	6.3×11	270	B41827A2337M***
470	6.3 × 11	321	B41827A2477M***
1000	10 × 12.5	542	B41827A2108M***
2200	10 × 20	1005	B41827A2228M***
3300	$12.5 \times 20$	1195	B41827A2338M***
4700	12.5 × 25	1560	B41827A2478M***
6800	16 × 25	1925	B41827A2688M***
10000	16 × 25	2360	B41827A2109M***
15000	16 × 35.5	2855	B41827A2159M***
22000	18 × 40	3345	B41827A2229M***
V <sub>R</sub> = 10 V DC			
100	5 ×11	130	B41827A3107M***
220	6.3 × 11	280	B41827A3227M***
330	6.3 × 11	290	B41827A3337M***
470	8 ×11.5	385	B41827A3477M***
1000	10 × 12.5	650	B41827A3108M***
2200	10 × 20	1082	B41827A3228M***
3300	12.5 × 20	1436	B41827A3338M***
4700	12.5 × 25	1783	B41827A3478M***
10000	16 × 35.5	2700	B41827A3109M***
15000	18 × 35.5	3100	B41827A3159M***
V <sub>R</sub> = 16 V DC			
100	5 ×11	160	B41827A4107M***
220	6.3 × 11	261	B41827A4227M***
330	8 ×11.5	373	B41827A4337M***
470	8 × 11.5	446	B41827A4477M***
1000	10 × 16	790	B41827A4108M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk

002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for  $\emptyset 5 \text{ mm}$ )

007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset$  5 ... 6.3 mm)

006 = for taped leads, Ammo pack, lead spacing F = 3.5 mm (for  $\emptyset$  8 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)





## Standard series - 85 °C



#### Technical data and ordering codes - B41827

$C_R$	Case dimensions	I <sub>AC,R</sub>	Ordering code
120 Hz, 20 °C	$d \times I$	120 Hz, 85 °C	(composition see below)
μF	mm	mA	
V <sub>R</sub> = 16 V DC			
2200	12.5 × 20	1310	B41827A4228M***
3300	12.5 × 25	1695	B41827A4338M***
4700	16 × 25	2100	B41827A4478M***
10000	18 × 35.5	2980	B41827A4109M***
V <sub>R</sub> = 25 V DC			
47	5 ×11	108	B41827A5476M***
100	6.3 × 11	192	B41827A5107M***
220	8 ×11.5	335	B41827A5227M***
330	10 × 12.5	446	B41827A5337M***
470	10 × 12.5	547	B41827A5477M***
1000	10 × 20	962	B41827A5108M***
2200	12.5 × 25	1560	B41827A5228M***
3300	16 × 25	1985	B41827A5338M***
4700	16 × 31.5	2455	B41827A5478M***
V <sub>R</sub> = 35 V DC			
33	5 ×11	102	B41827A7336M***
47	5 ×11	130	B41827A7476M***
100	6.3 × 11	212	B41827A7107M***
220	10 × 12.5	390	B41827A7227M***
330	10 × 12.5	495	B41827A7337M***
470	10 × 16	652	B41827A7477M***
1000	12.5 × 25	1158	B41827A7108M***
2200	16 × 25	1810	B41827A7228M***
3300	16 × 31.5	2293	B41827A7338M***
4700	18 × 35.5	2710	B41827A7478M***

#### Composition of ordering code

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000 = for standard leads, bulk

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002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for  $\emptyset$  5 mm)

007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset 5 \dots 6.3 \text{ mm}$ )

006 = for taped leads, Ammo pack, lead spacing F = 3.5 mm (for  $\emptyset$  8 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)





#### Standard series - 85 °C

#### Technical data and ordering codes - B41827

		Ι.	I Oud a discussion and a
C <sub>R</sub>	Case dimensions	I <sub>AC,R</sub>	Ordering code
120 Hz, 20 °C	d×I	120 Hz, 85 °C	(composition see below)
μF	mm	mA	
$V_R = 50 \text{ V DC}$			
10	5 ×11	58	B41827A6106M***
22	5 ×11	85	B41827A6226M***
33	5 ×11	117	B41827A6336M***
47	6.3 × 11	155	B41827A6476M***
100	8 ×11.5	260	B41827A6107M***
220	10 × 12.5	430	B41827A6227M***
330	10 × 16	510	B41827A6337M***
470	10 × 20	700	B41827A6477M***
1000	16 × 20	1100	B41827A6108M***
2200	16 × 31.5	1540	B41827A6228M***
V <sub>R</sub> = 63 V DC			
10	5 ×11	60	B41827A8106M***
22	6.3 × 11	100	B41827A8226M***
33	6.3 × 11	140	B41827A8336M***
47	6.3 × 11	170	B41827A8476M***
100	10 × 12.5	300	B41827A8107M***
220	10 × 20	475	B41827A8227M***
330	12.5 × 20	710	B41827A8337M***
470	12.5 × 25	900	B41827A8477M***
1000	16 × 31.5	1300	B41827A8108M***
V <sub>R</sub> = 100 V DC			
0.47	5 ×11	13	B41827A9474M***
1.0	5 ×11	20	B41827A9105M***
2.2	5 ×11	29	B41827A9225M***
3.3	5 × 11	36	B41827A9335M***
4.7	5 ×11	43	B41827A9475M***
10	6.3×11	75	B41827A9106M***
22	8 × 11.5	130	B41827A9226M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk

002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for  $\emptyset$  5 mm)

007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset$  5 ... 6.3 mm)

006 = for taped leads, Ammo pack, lead spacing F = 3.5 mm (for  $\emptyset$  8 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)









#### Technical data and ordering codes - B41827

C <sub>R</sub>	Case dimensions	I <sub>AC,R</sub>	Ordering code
120 Hz, 20 °C	d×I	120 Hz, 85 °C	(composition see below)
μF	mm	mA	
V <sub>R</sub> = 100 V DC			
33	10 × 12.5	180	B41827A9336M***
47	10 × 12.5	230	B41827A9476M***
100	10 × 20	370	B41827A9107M***
220	12.5 × 25	620	B41827A9227M***
330	16 × 25	760	B41827A9337M***
470	16 × 31.5	1000	B41827A9477M***
1000	18 × 40	1380	B41827A9108M***

#### Composition of ordering code

#### \*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk

002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for Ø 5 mm)

007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset 5 \dots 6.3 \text{ mm}$ )

006 = for taped leads, Ammo pack, lead spacing F = 3.5 mm (for Ø 8 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)





#### Standard series - 85 °C

# Technical data and ordering codes - B43827

C <sub>B</sub>	Case dimensions	I <sub>AC,R</sub>	Ordering code
120 Hz, 20 °C	d×I	120 Hz, 85 °C	(composition see below)
μF	mm	mA	(**
V <sub>R</sub> = 160 V DC			
0.47	5 ×11	15	B43827A1474M***
1.0	5 × 11	22	B43827A1105M***
2.2	5 ×11	33	B43827A1225M***
3.3	6.3 × 11	40	B43827A1335M***
4.7	6.3 × 11	49	B43827A1475M***
10	8 × 11.5	80	B43827A1106M***
22	10 × 16	152	B43827A1226M***
33	10 × 20	203	B43827A1336M***
47	12.5 × 25	268	B43827A1476M***
100	16 × 25	423	B43827A1107M***
220	16 × 35.5	786	B43827A1227M***
330	18 × 35.5	945	B43827A1337M***
V <sub>R</sub> = 200 V DC			
3.3	6.3 × 11	40	B43827A2335M***
4.7	8 × 11.5	56	B43827A2475M***
10	10 × 12.5	95	B43827A2106M***
22	10 × 20	170	B43827A2226M***
33	$12.5 \times 20$	225	B43827A2336M***
47	12.5 × 20	267	B43827A2476M***
100	16 × 25	490	B43827A2107M***
220	18 × 35.5	815	B43827A2227M***
V <sub>R</sub> = 250 V DC			
0.47	5 × 11	15	B43827F2474M***
1.0	5 × 11	22	B43827F2105M***
2.2	6.3 × 11	33	B43827F2225M***
3.3	6.3 × 11	47	B43827F2335M***
4.7	8 × 11.5	56	B43827F2475M***
10	10 × 12.5	103	B43827F2106M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk

002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for  $\emptyset$  5 mm)

007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset$  5 ... 6.3 mm)

006 = for taped leads, Ammo pack, lead spacing F = 3.5 mm (for  $\emptyset$  8 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)





## Standard series - 85 °C



#### Technical data and ordering codes - B43827

$C_R$	Case dimensions	$I_{AC,R}$	Ordering code
120 Hz, 20 °C	$d \times I$	120 Hz, 85 °C	(composition see below)
μF	mm	mA	
V <sub>R</sub> = 250 V DC			
22	10 × 20	185	B43827F2226M***
33	12.5 × 25	225	B43827F2336M***
47	12.5 × 25	268	B43827F2476M***
100	16 × 31.5	525	B43827F2107M***
V <sub>R</sub> = 350 V DC			
1.0	6.3 × 11	22	B43827A4105M***
2.2	8 × 11.5	38	B43827A4225M***
3.3	10 × 12.5	54	B43827A4335M***
4.7	10 × 12.5	65	B43827A4475M***
10	10 × 20	115	B43827A4106M***
22	12.5 × 25	185	B43827A4226M***
33	16 × 25	276	B43827A4336M***
47	16 × 35.5	334	B43827A4476M***
100	18 × 40	510	B43827A4107M***
V <sub>R</sub> = 400 V DC			
0.47	6.3 × 11	15	B43827A9474M***
1.0	6.3 × 11	23	B43827A9105M***
2.2	8 ×11.5	40	B43827A9225M***
3.3	10 × 12.5	55	B43827A9335M***
4.7	10 × 16	67	B43827A9475M***
10	12.5 × 20	118	B43827A9106M***
22	16 × 25	200	B43827A9226M***
33	16 × 25	280	B43827A9336M***
47	16 × 35.5	362	B43827A9476M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk

002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for  $\varnothing$  5 mm)

007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset 5 \dots 6.3 \text{ mm}$ )

 $006 = \text{ for taped leads, Ammo pack, lead spacing F} = 3.5 \text{ mm (for } \emptyset \text{ 8 mm)}$ 

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)





#### Standard series - 85 °C

#### Technical data and ordering codes - B43827

C <sub>R</sub>	Case dimensions	I <sub>AC,R</sub>	Ordering code
120 Hz, 20 °C	$d \times I$	120 Hz, 85 °C	(composition see below)
μF	mm	mA	
V <sub>R</sub> = 450 V DC			
0.47	8 ×11.5	18	B43827A5474M***
1.0	8 ×11.5	24	B43827A5105M***
2.2	10 × 12.5	36	B43827A5225M***
3.3	10 × 16	44	B43827A5335M***
4.7	10 × 20	56	B43827A5475M***
10	12.5 × 20	95	B43827A5106M***
22	16 × 25	170	B43827A5226M***
33	16 × 31.5	235	B43827A5336M***
47	18 × 40	302	B43827A5476M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk

002 = for cut leads, bulk

016 = for taped leads, Ammo pack, lead spacing F = 2.0 mm (for  $\emptyset$  5 mm)

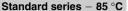
007 = for taped leads, Ammo pack, lead spacing F = 2.5 mm for  $\emptyset$  5 ... 6.3 mm)

006 = for taped leads, Ammo pack, lead spacing F = 3.5 mm (for  $\emptyset$  8 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (for  $\emptyset$  5 ... 12.5 mm)



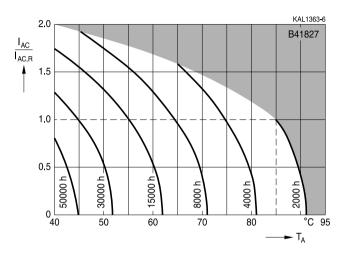






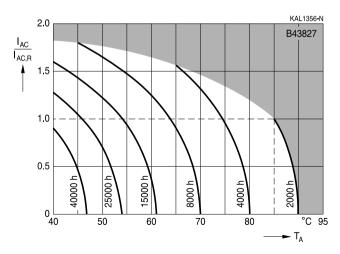
#### Useful life

depending on ambient temperature T<sub>A</sub> under ripple current operating conditions<sup>1)</sup> B41827



# **Useful life**

depending on ambient temperature T<sub>A</sub> under ripple current operating conditions<sup>1)</sup> B43827



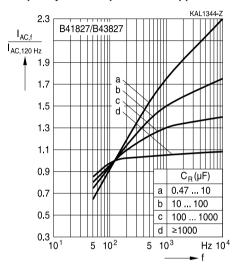
Refer to chapter "General technical information, 5.3 Calculation of useful life" for an explanation on how to interpret the useful life graphs.





# Standard series - 85 °C

# Frequency factor of permissible ripple current I<sub>AC</sub> versus frequency f





#### Standard series - 85 °C



# Taping, packing and lead configurations

## **Taping**

Single-ended capacitors are available taped in Ammo pack from diameter 4 to 18 mm as follows:

Lead spacing  $F = 2.0 \text{ mm} (\emptyset \text{ d} = 4 \dots 5 \text{ mm})$ 

Lead spacing  $F = 2.5 \text{ mm} (\emptyset \text{ d} = 4 \dots 6.3 \text{ mm})$ 

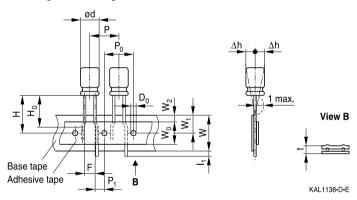
Lead spacing  $F = 3.5 \text{ mm} (\emptyset \text{ d} = 8 \text{ mm})$ 

Lead spacing  $F = 5.0 \text{ mm} (\emptyset \text{ d} = 4 \dots 12.5 \text{ mm})$ 

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

# Lead spacing 2.0 mm ( $\emptyset$ d = 4 ... 5 mm)

Last 3 digits of ordering code: 016



#### Dimensions in mm

Ø d	F	Н	W	$W_0$	$W_1$	$W_2$	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	Δh	$D_0$
4 5	2.0	18.5	18.0	7.0	9.0	3.0	12.7	12.7	5.10	1.0	0.7	1	4.0
	+0.8 -0.2	±0.75	±0.5	min.	±0.5	max.	±1.0	±0.3	±0.7	max.	±0.2	±1.0	±0.2

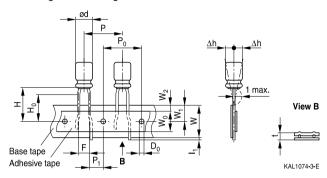




## Standard series - 85 °C

# Lead spacing 2.5 mm ( $\emptyset$ d = 4 ... 6.3 mm)

Last 3 digits of ordering code: 007

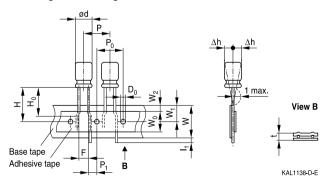


#### **Dimensions in mm**

Ø d	F	Н	W	$W_0$	$W_1$	$W_2$	H <sub>0</sub>	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	Δh	D <sub>0</sub>
4 6.3	2.5	18.5	18.0	5.5	9.0	1.5	16.0	12.7	12.7	5.1	1.0	0.7	1.0	4.0
Toler-	+0.8	±0.75	±0.5	min	±0.5	mov	±0 E	⊥1 ∩	±0.0	±0 E	mov	±0.0	may	±0.2
rance	-0.2	±0.75	±0.5	1111111.	±0.5	max.	±0.5	±1.0	±0.2	±0.5	max.	±0.2	max.	±0.∠

# Lead spacing 3.5 mm ( $\emptyset$ d = 8 mm)

Last 3 digits of ordering code: 006



#### Dimensions in mm

Ø d	F	Н	W	$W_0$	$W_1$	$W_2$	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	Δh	D <sub>0</sub>
8	3.5	18.5	18.0	10	9.0	3.0	12.7	12.7	4.6	1.0	0.7	1.0	4.0
Toler- ance	+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. Taping is available up to dimensions  $d \times I = 8 \times 15$  mm.

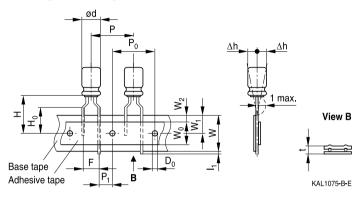


#### Standard series - 85 °C



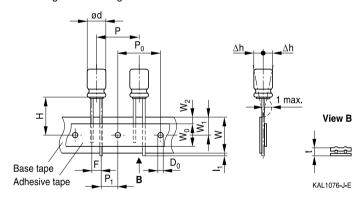
# Lead spacing 5.0 mm ( $\emptyset$ d = 4 ... 8 mm)

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

Ød	F	Н	W	$W_0$	$W_1$	$W_2$	H₀	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	Δh	$D_0$
4 6.3	5.0	18.5	18.0	5.5	9.0	1.5	16.0	12.7	12.7	3.85	1.0	0.6	1.0	4.0
8		20.0		10.0			16.0	12.7	12.7	3.85				
10	5.0	19.0	18.0	12.5	9.0	1.5	-	12.7	12.7	3.85	1.0	0.6	1.0	4.0
12.5		19.0		12.5			_	15.0	15.0	5.0				
Toler- ance	+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  $d \times I = 10 \times 31.5$  mm and  $12.5 \times 25$  mm.

Taping is not available for  $d \times I = 8 \times 20$  mm.

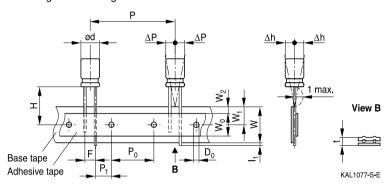




#### Standard series - 85 °C

# Lead spacing 7.5 mm (∅ d = 16 ...18 mm)

Last 3 digits of ordering code: 009



#### Dimensions in mm

Ød	F	Н	W	$W_0$	$W_1$	$W_2$	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	ΔΡ	Δh	D <sub>0</sub>
16	7.5	18.5	10.0	10 5	0.0	1 5	20.0	15.0	0.75	1.0	0.7	0	0	4.0
18	7.5	16.5	10.0	12.5	9.0	1.5	30.0	15.0	3.75	1.0	0.7	٥	U	4.0
Toler- ance	±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  $d \times I = 16 \times 31.5$  mm and  $18 \times 31.5$  mm.



## Standard series - 85 °C



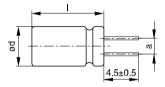
#### Cut or kinked leads

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

# Cut leads (Chapter A)

Available for series B41002, B41022, B41044, B41827, B41828, B43044, B43082, B43086, B43088, B43827, B43828.

Last 3 digits of ordering code: 002



KAL1086-R

Case size d x l (mm)	Dimensions
, ,	(mm)
	a ±0.5
4 x 7	1.5
5 x 7	2.0
5 x 11	2.0
6.3 x 7	2.5
6.3 x 11	2.5
8 x 7	3.5
8 x 11.5	3.5
8 x 15	3.5
8 x 20	3.5
10 x 12.5	5.0
10 x 16	5.0
10 x 20	5.0
10 x 25	5.0
10 x 31.5	5.0

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





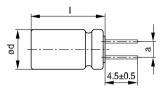
#### Standard series - 85 °C

# Cut leads (Chapter B)

Available for series B41858, B41859, B41863, B41866, B41868, B41888, B41890, B41896, B42824, B42851, B43866, B43867, B43890, B43896.

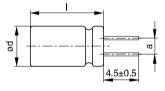
Last 3 digits of ordering code: 002

# With stand-off rubber seal



KAL1085-I

#### With flat rubber seal



KAL1086-R

Case size	Dimensions (mm)
$d \times I (mm)$	a ±0.5
10 × 12.5	5.0
10×16	5.0
10 × 20	5.0
12.5 × 20	5.0
12.5 × 25	5.0
16 × 20	7.5
16 × 25	7.5
16 × 31.5	7.5
16 × 35.5	7.5
18 × 20	7.5
18 × 25	7.5
18 × 31.5	7.5
18 × 35	7.5
18 × 40	7.5



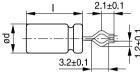
# Standard series - 85 °C



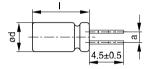
# Kinked leads (Chapter A)

Available for series B41002, B41022, B41044, B41827, B41828, B43044, B43082, B43086, B43088, B43827, B43828.

Last 3 digits of ordering code: 001



KAL1137-5



KAL1084-A

Coop size d v l (mm)	Dimensions
Case size d x I (mm)	
	(mm)
	a ±0.5
4 x 7	1.5
5 x 7	2.0
5 x 11	2.0
6.3 x 7	2.5
6.3 x 11	2.5
8 x 7	3.5
8 x 11.5	3.5
8 x 15	3.5
8 x 20	3.5
10 x 12.5	5.0
10 x 16	5.0
10 x 20	5.0
10 x 25	5.0
10 x 31.5	5.0

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





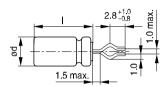
#### Standard series - 85 °C

# Kinked leads (Chapter B)

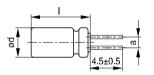
Available for series B41858, B41859, B41863, B41866, B41868, B41888, B41890, B41896, B42824, B42851, B43866, B43867, B43890, B43896.

Last 3 digits of ordering code: 001

#### With stand-off rubber seal

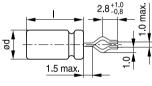


KAL1081-K

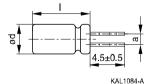


KAL1083-2

#### With flat rubber seal



KAL1082-T



Case size Dimensions (mm)  $d \times I (mm)$ a ±0.5 10 × 20 5.0  $12.5 \times 20$ 5.0  $12.5 \times 25$ 5.0 16 × 20 7.5 16 × 25 7.5  $16 \times 31.5$ 7.5  $16 \times 35.5$ 7.5  $18 \times 20$ 7.5  $18 \times 25$ 7.5  $18 \times 31.5$ 7.5  $18 \times 35$ 7.5  $18 \times 40$ 7.5



#### Standard series - 85 °C



#### 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.

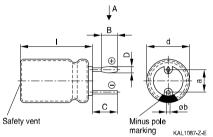
There are three configurations available: Crimped leads, J leads, bent 90° leads

Available for series B41858, B41859, B41863, B41866, B41868, B41888, B41890, B41896, B42824, B42851, B43866, B43867, B43890, B43896.

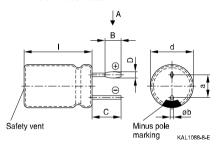
#### Crimped leads

Last 3 digits of ordering code: 003

## With stand-off rubber seal

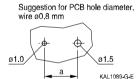


#### With flat rubber seal

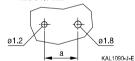


#### Suggestion for PCB hole diameter









Case size	Dimension	ıs (mm)				
$d \times I \text{ (mm)}$	B ±0.2	C ±0.5	D ±0.1	E ±0.1	a ±0.5	∅b
16 × 20	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
16 × 25	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
16 × 31.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
16 × 35.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05
18 × 20	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 × 25	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 × 31.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 × 35	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1
18 × 40	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1