

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









# Aluminum electrolytic capacitors

Series/Type: B41866

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product		Deadline Last Orders	Last Shipments
B41866G8687M000		2018-06-22	2018-09-30	2018-12-31
B41866C5228M000		2018-06-22	2018-09-30	2018-12-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.



#### Single-ended capacitors

High ripple current - 125 °C

#### Long-life grade capacitors

#### **Applications**

Automotive electronics

#### **Features**

- High reliability and long useful life
- High ripple current capability
- Wide temperature range up to 125 °C
- RoHS-compatible

#### Construction

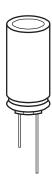
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on the insulating sleeve
- Case with safety vent

#### **Delivery mode**

Terminal configurations and packing:

- Bulk
- Taped, Ammo pack
- Cut
- Kinked
- PAPR (Protection Against Polarity Reversal): crimped leads, J leads, bent leads

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









# Specifications and characteristics in brief

Rated voltage V <sub>R</sub>	10 75 V DC										
Surge voltage V <sub>S</sub>	1.15 · V <sub>R</sub>	(1.1 · V	<sub>R</sub> for 75 V [	DC)							
Rated capacitance C <sub>R</sub>	47 10000 μF										
Capacitance tolerance	±20% ≙ M										
Dissipation factor tan δ (20 °C, 120 Hz)	For capacitance 1000 µF.	higher th	ıan 1000 μ	F add 0.0	02 for ev	ery incre	ase of				
	V <sub>R</sub> (V DC)	10	16 25	35	50	63	75				
	tan δ (max.)	0.20	0.17	0.12	0.10	0.12	0.12				
Leakage current I <sub>leak</sub> (20 °C, 5 min)	$I_{leak} = 0.01 \mu\text{A}$	$I_{leak} = 0.01 \mu\text{A} \cdot \left(\frac{C_R}{\mu\text{F}} \cdot \frac{V_R}{V}\right)$									
	or 3 μA, whichev	er is gre	ater								
Self-inductance ESL	Diameter (mm)		8 12.5	16	18						
	ESL (nH)		20	26	34						
Useful life <sup>1)</sup>											
125 °C; V <sub>R</sub> ; I <sub>AC,R</sub>	$>$ 3000 h for $\emptyset$ = $>$ 3000 h for $V_R$ =	> 2000 h for $\varnothing$ = 8 mm and $V_R \le 63$ V > 3000 h for $\varnothing$ = 10 mm and $V_R \le 63$ V > 3000 h for $V_R$ = 75 V > 5000 h for $\varnothing$ $\ge$ 12.5 mm and $V_R \le 63$ V									
Requirements	ΔC/C	≤ 35% (	of initial val	ue							
•	tan δ	≤ 3 time	es initial spe	initial specified limit							
	I <sub>leak</sub>	≤ initial	specified li	mit							
Voltage endurance test											
125 °C; V <sub>R</sub>	2000 h for $\emptyset = 8$	mm and	$V_R \le 63 \text{ V}$								
	3000 h for $\emptyset = 1$	0 mm an	d $V_R \le 63$	/							
	3000 h for $V_R = 7$	75 V									
	5000 h for $\emptyset \ge 1$	2.5 mm a	and $V_R \le 63$	3 V							
Post test requirements	ΔC/C	≤ 30% (	of initial val	ue							
4	tan δ		es initial spe		mit						
	I <sub>leak</sub>		specified li								
Vibration resistance test	To IEC 60068-2-										
	Frequency range			splacem	ent amp	litude ma	ax.				
	1.5 mm, acceler	ation max	x. 20 <i>g</i> , dur	ation 3 ×	< 2 h.						
	Capacitor rigidly	clamped	by the alu	minum c	ase.						
IEC climatic category	To IEC 60068-1:										
	55/125/56 (-55	°C/+125	°C/56 days	damp h	eat test)	)					
Sectional specification	IEC 60384-4, AE	EC-Q200									
					·	·					

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





# High ripple current - 125 $^{\circ}$ C

# **Dimensional drawings**

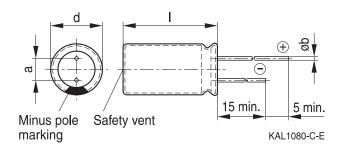
#### With stand-off rubber seal

Diameters (mm): 10, 12.5, 16, 18

# Stand-off rubber seal the stand-off rubber seal

#### With flat rubber seal

Diameter (mm): 8



#### **Dimensions and weights**

Dimensions (r	nm)			Approx. weight
d +0.5	1	a ±0.5	b	g
8	11.5 +1.5	3.5	0.60 ±0.05	1.0
10	12.5 +1.0	5.0	0.60 ±0.05	1.6
10	16 +1.0	5.0	0.60 ±0.05	1.9
10	20 +2.0	5.0	0.60 ±0.05	2.6
12.5	20 +2.0	5.0	0.60 ±0.05	3.6
12.5	25 +2.0	5.0	0.60 ±0.05	4.5
12.5	40 +2.0	5.0	0.80 ±0.05	7.4
16	20 +2.0	7.5	0.80 ±0.05	5.5
16	25 +2.0	7.5	0.80 ±0.05	7.5
16	31.5 +2.0	7.5	0.80 ±0.05	7.8
16	35.5 +2.0	7.5	0.80 ±0.05	9.2
18	20 +2.0	7.5	0.80 ±0.1	8.0
18	25 +2.0	7.5	0.80 ±0.1	9.0
18	31.5 +2.0		0.80 ±0.1	11.0
18	35 +2.0	7.5	0.80 ±0.1	13.0
18	40 +2.0	7.5	0.80 ±0.1	16.0







# Overview of available types

Other voltage and capacitance ratings are available upon request.

V <sub>R</sub> (V DC)	10	16	25	35
	Case dimensions	s d × l (mm)		
C <sub>R</sub> (μF)				
100			8 × 11.5	8 ×11.5
120			8 × 11.5	8 ×11.5
150			8 × 11.5	10 × 12.5
180			8 × 11.5	10 × 12.5
220			8 × 11.5	10 × 12.5
270			10 × 12.5	10 × 16
330		8 ×11.5	10 × 12.5	10 × 16
390			10 × 16	10 × 20
470	8 ×11.5	10 × 12.5	10 × 16	10 × 20
560	10 × 12.5		10 × 20	12.5 × 20
680	10 × 16		10 × 20	12.5 × 20
820		10 × 16	12.5 × 20	12.5 × 25
1000	10 × 16	10 × 20	12.5 × 20	16 × 20
1200		12.5 × 20	12.5 × 25	16 × 25
1500	10 × 20		12.5 × 25	16 × 25
				18 × 20
1800		12.5 × 25	16 × 20	16 × 31.5
				18 × 25
2200	12.5 × 20	16 × 20	12.5 × 40	16 × 35.5
			16 × 25 18 × 20	18 × 31.5
2700	12.5 × 25	18 × 20	18 × 25	18 × 35
3300	16 × 20	18 × 25	16 × 31.5	18 × 40
3900	10 × 20	10 × 20	16 × 35.5	10 × 40
0000			18 × 31.5	
4700	18 × 20	18 × 31.5	18 × 35	
5600	-	18 × 35	18 × 40	
6800		18 × 40	-	
8200	18 × 31.5			
10000	18 × 40			
-			<u> </u>	





# High ripple current - 125 $^{\circ}\text{C}$

# Overview of available types

Other voltage and capacitance ratings are available upon request.

V <sub>R</sub> (V DC)	50	63	75
	Case dimensions d × I (n	nm)	-
C <sub>R</sub> (μF)			
47	8 × 11.5		
56	8 × 11.5		
68	8 × 11.5		
82	8 × 11.5		
100	10 × 12.5	10 × 16	
120	10 × 16		
150	10 × 16		
180	10 × 20	10 × 20	
220	10 × 20	12.5 × 20	
270	10 × 20		16 × 20
330	12.5 × 20	12.5 × 20	16 × 25 18 × 25
390	12.5 × 25		
470	12.5 × 25 16 × 20	16 × 20	16 × 31.5 18 × 25
560	16 × 20		
680	16 × 25	12.5 × 40 16 × 25 18 × 20	18 × 31.5
820	16 × 25 18 × 20	16 × 31.5	18 × 35
1000	16 × 31.5 18 × 25	16 × 31.5	18 × 40
1200	16 × 35.5 18 × 31.5	18 × 31.5	
1500	18 × 35	18 × 35	
1800	18 × 40	18 × 40	







#### Technical data and ordering codes

$\overline{C_{R}}$	Case	ESR <sub>max</sub>	ESR <sub>max</sub>	Z <sub>max</sub>	I <sub>AC,R</sub>	Ordering code
120 Hz	dimensions	10 kHz	10 kHz	100 kHz	100 kHz	(composition see
20 °C	d×I	-40 °C	20 °C	20 °C	125 °C	below)
μF	mm	Ω	$\Omega$ $\Omega$ $\square$ $\square$ $\square$ $\square$		mA	,
$V_R = 10 V \Gamma$	C					
470	8 × 11.5	5.170	0.646	0.573	297	B41866C3477M***
560	10 × 12.5	2.980	0.373	0.336	450	B41866C3567M***
680	10 × 16	1.404	0.175	0.160	714	B41866C3687M***
1000	10 × 16	1.404	0.175	0.160	714	B41866C3108M***
1500	10 × 20	1.070	0.134	0.127	875	B41866C3158M***
2200	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C3228M***
2700	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C3278M***
3300	16 × 20	0.401	0.050	0.046	1895	B41866C3338M***
4700	18 × 20	0.341	0.043	0.040	2190	B41866D3478M***
8200	18 × 31.5	0.226	0.028	0.027	3178	B41866C3828M***
10000	18 × 40	0.153	0.019	0.018	4244	B41866C3109M***
V <sub>R</sub> = 16 V C	C					
330	8 × 11.5	5.170	0.646	0.573	297	B41866C4337M***
470	10 × 12.5	2.980	0.373	0.336	450	B41866C4477M***
820	10 × 16	1.404	0.175	0.160	714	B41866C4827M***
1000	10 × 20	1.070	0.134	0.127	875	B41866C4108M***
1200	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C4128M***
1800	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C4188M***
2200	16 × 20	0.401	0.050	0.046	1895	B41866C4228M***
2700	18 × 20	0.341	0.043	0.040	2190	B41866D4278M***
3300	18 × 25	0.314	0.039	0.037	2454	B41866C4338M***
4700	18 × 31.5	0.226	0.028	0.027	3178	B41866C4478M***
5600	18 × 35	0.187	0.023	0.022	3638	B41866C4568M***
6800	18 × 40	0.153	0.019	0.018	4244	B41866C4688M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk (for  $d \times I = 10 \times 20 \dots 12.5 \times 25 \text{ mm}$  and  $\varnothing 16 \dots 18 \text{ mm}$ )

002 = for cut leads, bulk (for  $\emptyset$  10 ... 18 mm, excluding d  $\times$  I = 12.5  $\times$  40 mm)

 $003 = \text{ for crimped leads, blister (for } \emptyset 16 \dots 18 \text{ mm)}$ 

004 = for J leads, blister (for  $\varnothing$  10 ... 18 mm, excluding d × I = 12.5 × 40 and 18 × 40 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  $d \times I = 8 \times 11.5 \dots 12.5 \times 25 \text{ mm}$ )

009 = for taped leads, Ammo pack, lead spacing F = 7.5 mm (for d  $\times$  I = 16  $\times$  20 ... 16  $\times$  31.5 mm and 18  $\times$  20 ... 18  $\times$  31.5 mm)





# High ripple current - 125 °C

#### Technical data and ordering codes

$\overline{C_R}$	Case	ESR <sub>max</sub>	ESR <sub>max</sub>	Z <sub>max</sub>	I <sub>AC,R</sub>	Ordering code
120 Hz	dimensions	10 kHz	10 kHz	100 kHz	100 kHz	(composition see
20 °C	d×I	-40 °C	20 °C	20 °C	125 °C	below)
μF	mm	Ω	Ω	Ω	mA	,
V <sub>R</sub> = 25 V D	C					
100	8 × 11.5	5.170	0.646	0.573	297	B41866C5107M***
120	8 × 11.5	5.170	0.646	0.573	297	B41866C5127M***
150	8 × 11.5	5.170	0.646	0.573	297	B41866C5157M***
180	8 × 11.5	5.170	0.646	0.573	297	B41866C5187M***
220	8 × 11.5	5.170	0.646	0.573	297	B41866C5227M***
270	10 × 12.5	2.980	0.373	0.336	450	B41866C5277M***
330	10 × 12.5	2.980	0.373	0.336	450	B41866C5337M***
390	10 × 16	1.404	0.175	0.160	714	B41866C5397M***
470	10 × 16	1.404	0.175	0.160	714	B41866C5477M***
560	10 × 20	1.070	0.134	0.127	875	B41866C5567M***
680	10 × 20	1.070	0.134	0.127	875	B41866C5687M***
820	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C5827M***
1000	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C5108M***
1200	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C5128M***
1500	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C5158M***
1800	16 × 20	0.401	0.050	0.046	1895	B41866C5188M***
2200	$12.5 \times 40$	0.406	0.051	0.047	2185	B41866C5228M***
2200	16 × 25	0.314	0.039	0.037	2279	B41866D5228M***
2200	18 × 20	0.341	0.043	0.040	2190	B41866E5228M***
2700	18 × 25	0.312	0.039	0.037	2454	B41866D5278M***
3300	16 × 31.5	0.248	0.031	0.029	2822	B41866D5338M***
3900	16 × 35.5	0.200	0.025	0.024	3230	B41866E5398M***
3900	18 × 31.5	0.224	0.028	0.027	3178	B41866D5398M***
4700	18 × 35	0.184	0.023	0.022	3638	B41866D5478M***
5600	18 × 40	0.152	0.019	0.018	4244	B41866C5568M***

#### Composition of ordering code

- 000 = for standard leads, bulk
- 001 = for kinked leads, bulk (for d  $\times$  I = 10  $\times$  20 ... 12.5  $\times$  25 mm and  $\varnothing$  16 ... 18 mm)
- 002 = for cut leads, bulk (for  $\emptyset$  10 ... 18 mm, excluding d  $\times$  I = 12.5  $\times$  40 mm)
- $003 = \text{ for crimped leads, blister (for } \emptyset 16 \dots 18 \text{ mm)}$
- 004 = for J leads, blister (for  $\varnothing$  10 ... 18 mm, excluding d × I = 12.5 × 40 and 18 × 40 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  $d \times I = 8 \times 11.5 \dots 12.5 \times 25 \text{ mm}$ )
- 009 = for taped leads, Ammo pack, lead spacing F = 7.5 mm (for  $d \times I = 16 \times 20 \dots 16 \times 31.5$  mm and  $18 \times 20 \dots 18 \times 31.5$  mm)
- $012 = \text{ for bent } 90^{\circ} \text{ leads, blister (for } \emptyset 16 \dots 18 \text{ mm)}$

<sup>\*\*\* =</sup> Version







#### Technical data and ordering codes

$\overline{C_R}$	Case	ESR <sub>max</sub>	ESR <sub>max</sub>	Z <sub>max</sub>	I <sub>AC,R</sub>	Ordering code
120 Hz	dimensions	10 kHz	10 kHz	100 kHz	100 kHz	(composition see
20 °C	d×I	-40 °C	20 °C	20 °C	125 °C	below)
μF	mm	Ω	Ω	Ω	mA	,
$V_R = 35 V D$	C					
100	8 × 11.5	5.170	0.646	0.573	297	B41866C7107M***
120	8 × 11.5	5.170	0.646	0.573	297	B41866C7127M***
150	10 × 12.5	2.980	0.373	0.336	450	B41866C7157M***
180	10 × 12.5	2.980	0.373	0.336	450	B41866C7187M***
220	10 × 12.5	2.980	0.373	0.336	450	B41866C7227M***
270	10 × 16	1.404	0.175	0.160	714	B41866C7277M***
330	10 × 16	1.404	0.175	0.160	714	B41866C7337M***
390	10 × 20	1.070	0.134	0.127	875	B41866C7397M***
470	10 × 20	1.070	0.134	0.127	875	B41866C7477M***
560	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C7567M***
680	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C7687M***
820	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C7827M***
1000	16 × 20	0.401	0.050	0.046	1895	B41866C7108M***
1200	16 × 25	0.314	0.039	0.037	2279	B41866C7128M***
1500	16 × 25	0.314	0.039	0.037	2279	B41866C7158M***
1500	18 × 20	0.341	0.043	0.040	2190	B41866D7158M***
1800	16 × 31.5	0.249	0.031	0.029	2822	B41866C7188M***
1800	18 × 25	0.314	0.039	0.037	2454	B41866D7188M***
2200	16 × 35.5	0.200	0.025	0.024	3230	B41866D7228M***
2200	18 × 31.5	0.226	0.028	0.027	3178	B41866C7228M***
2700	18 × 35	0.187	0.023	0.022	3638	B41866C7278M***
3300	18 × 40	0.153	0.019	0.018	4244	B41866C7338M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk (for  $d \times I = 10 \times 20 \dots 12.5 \times 25 \text{ mm}$  and  $\emptyset$  16 ... 18 mm)

002 = for cut leads, bulk (for  $\emptyset$  10 ... 18 mm, excluding d  $\times$  I = 12.5  $\times$  40 mm)

 $003 = \text{ for crimped leads, blister (for } \emptyset 16 \dots 18 \text{ mm)}$ 

004 = for J leads, blister (for  $\emptyset$  10 ... 18 mm, excluding d × I = 12.5 × 40 and 18 × 40 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  $d \times I = 8 \times 11.5 \dots 12.5 \times 25 \text{ mm}$ )

009 = for taped leads, Ammo pack, lead spacing F = 7.5 mm (for d  $\times$  I = 16  $\times$  20 ... 16  $\times$  31.5 mm and 18  $\times$  20 ... 18  $\times$  31.5 mm)





# High ripple current - 125 °C

#### Technical data and ordering codes

$\overline{C_R}$	Case	ESR <sub>max</sub>	ESR <sub>max</sub>	Z <sub>max</sub>	I <sub>AC,R</sub>	Ordering code
120 Hz	dimensions	10 kHz	10 kHz	100 kHz	100 kHz	(composition see
20 °C	$d \times I$	-40 °C	20 °C	20 °C	125 °C	below)
μF	mm	Ω	Ω	Ω	mA	·
$V_R = 50 \text{ V } \Gamma$	C					
47	8 × 11.5	5.687	0.711	0.631	370	B41866C6476M***
56	8 ×11.5	5.429	0.679	0.602	370	B41866C6566M***
68	8 ×11.5	5.170	0.646	0.573	370	B41866C6686M***
82	8 ×11.5	5.170	0.646	0.573	370	B41866C6826M***
100	10 × 12.5	2.980	0.373	0.336	450	B41866C6107M***
120	10 × 16	1.404	0.175	0.160	714	B41866C6127M***
150	10 × 16	1.404	0.175	0.160	714	B41866C6157M***
180	10 × 20	1.070	0.134	0.127	875	B41866C6187M***
220	10 × 20	1.070	0.134	0.127	875	B41866C6227M***
270	10 × 20	1.070	0.134	0.127	875	B41866C6277M***
330	$12.5 \times 20$	0.881	0.110	0.104	1105	B41866C6337M***
390	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C6397M***
470	$12.5 \times 25$	0.710	0.089	0.082	1358	B41866C6477M***
470	16 × 20	0.680	0.085	0.080	1370	B41866D6477M***
560	16 × 20	0.401	0.050	0.046	1895	B41866C6567M***
680	16 × 25	0.314	0.039	0.037	2279	B41866C6687M***
820	16 × 25	0.314	0.039	0.037	2279	B41866C6827M***
820	18 × 20	0.344	0.043	0.040	2190	B41866E6827M***
1000	16 × 31.5	0.249	0.031	0.029	2822	B41866C6108M***
1000	18 × 25	0.314	0.039	0.037	2454	B41866D6108M***
1200	16 × 35.5	0.200	0.025	0.024	3230	B41866D6128M***
1200	18 × 31.5	0.226	0.028	0.027	3178	B41866C6128M***
1500	18 × 35	0.187	0.023	0.022	3638	B41866C6158M***
1800	18 × 40	0.153	0.019	0.018	4244	B41866C6188M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk (for  $d \times I = 10 \times 20 \dots 12.5 \times 25 \text{ mm}$  and  $\emptyset$  16 ... 18 mm)

002 = for cut leads, bulk (for  $\emptyset$  10 ... 18 mm, excluding d  $\times$  I = 12.5  $\times$  40 mm)

 $003 = \text{ for crimped leads, blister (for } \emptyset 16 \dots 18 \text{ mm)}$ 

004 = for J leads, blister (for  $\varnothing$  10 ... 18 mm, excluding d × I = 12.5 × 40 and 18 × 40 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  $d \times I = 8 \times 11.5 \dots 12.5 \times 25 \text{ mm}$ )

009 = for taped leads, Ammo pack, lead spacing F = 7.5 mm (for d  $\times$  I = 16  $\times$  20 ... 16  $\times$  31.5 mm and 18  $\times$  20 ... 18  $\times$  31.5 mm)







#### Technical data and ordering codes

$\overline{C_R}$	Case	ESR <sub>max</sub>	ESR <sub>max</sub>	Z <sub>max</sub>	I <sub>AC,R</sub>	Ordering code
120 Hz	dimensions	10 kHz	10 kHz	100 kHz	100 kHz	(composition see
20 °C	d×I	-40 °C	20 °C	20 °C	125 °C	below)
μF	mm	Ω	Ω	Ω	mA	
$V_R = 63 V D$	C					
100	10 × 16	2.560	0.320	0.300	670	B41866G8107M***
180	10 × 20	2.160	0.270	0.250	820	B41866G8187M***
220	$12.5 \times 20$	1.760	0.220	0.200	1040	B41866G8227M***
330	$12.5 \times 20$	1.760	0.220	0.200	1040	B41866G8337M***
470	16 × 20	0.728	0.091	0.085	1790	B41866G8477M***
680	$12.5 \times 40$	0.752	0.094	0.088	2060	B41866G8687M***
680	16 × 25	0.536	0.067	0.061	2030	B41866H8687M***
680	18 × 20	0.600	0.075	0.070	1910	B41866J8687M***
820	16 × 31.5	0.472	0.059	0.053	2330	B41866G8827M***
1000	16 × 31.5	0.472	0.059	0.053	2330	B41866G8108M***
1200	18 × 31.5	0.368	0.046	0.041	2580	B41866G8128M***
1500	18 × 35	0.320	0.040	0.035	2890	B41866G8158M***
1800	18 × 40	0.280	0.035	0.030	3210	B41866G8188M***
$V_R = 75 V C$	C					
270	16 × 20	0.880	0.110	0.102	1790	B41866G0277M***
330	16 × 25	0.640	0.080	0.073	2030	B41866G0337M***
330	18 × 25	0.720	0.090	0.084	1910	B41866H0337M***
470	16 × 31.5	0.568	0.071	0.064	2330	B41866G0477M***
470	18 × 25	0.520	0.065	0.059	2280	B41866H0477M***
680	18 × 31.5	0.440	0.055	0.049	2580	B41866G0687M***
820	18 × 35	0.384	0.048	0.042	2890	B41866G0827M***
1000	18 × 40	0.336	0.042	0.036	3210	B41866G0108M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk (for  $d \times I = 10 \times 20 \dots 12.5 \times 25 \text{ mm}$  and  $\emptyset$  16 \dots 18 mm)

002 = for cut leads, bulk (for  $\emptyset$  10 ... 18 mm, excluding d  $\times$  I = 12.5  $\times$  40 mm)

 $003 = \text{ for crimped leads, blister (for } \emptyset 16 \dots 18 \text{ mm)}$ 

004 = for J leads, blister (for  $\emptyset$  10 ... 18 mm, excluding d  $\times$  I = 12.5  $\times$  40 and 18  $\times$  40 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  $d \times I = 8 \times 11.5 \dots 12.5 \times 25 \text{ mm}$ )

009 = for taped leads, Ammo pack, lead spacing F = 7.5 mm (for d  $\times$  I = 16  $\times$  20 ... 16  $\times$  31.5 mm and 18  $\times$  20 ... 18  $\times$  31.5 mm)

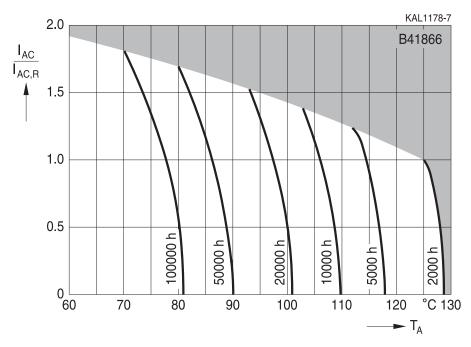




#### High ripple current - 125 °C

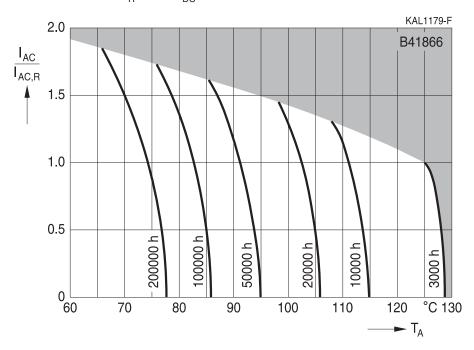
#### Useful life1)

depending on ambient temperature  $T_A$  under ripple current operating conditions d = 8 mm and  $V_R \leq 63\ V_{DC}$ 



#### Useful life1)

depending on ambient temperature  $T_A$  under ripple current operating conditions d = 10 mm and  $V_R \leq 63~V_{DC}$ 



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



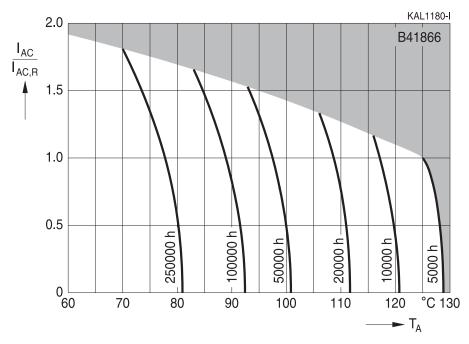




#### Useful life1)

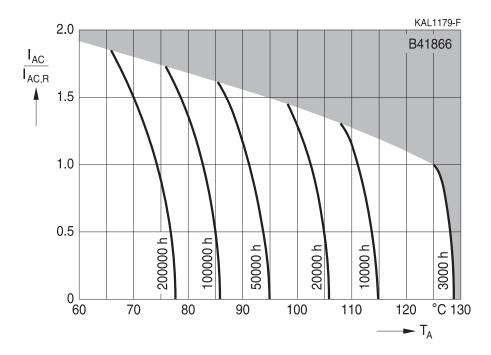
depending on ambient temperature  $T_{\text{A}}$  under ripple current operating conditions

 $d \geq 12.5 \ mm$  and  $V_R \leq 63 \ V_{DC}$ 



#### Useful life1)

depending on ambient temperature  $T_{\text{A}}$  under ripple current operating conditions  $V_{\text{R}} = 75 \ V_{\text{DC}}$ 



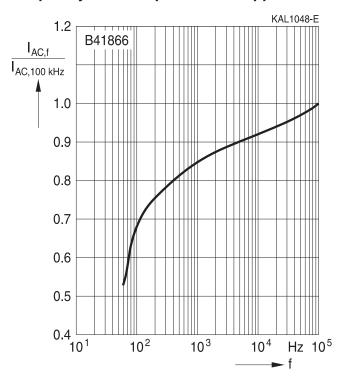
1) Refer to chapter "General technical information, 5 Useful life" on how to interpret useful life.



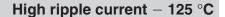


# High ripple current - 125 $^{\circ}$ C

# Frequency factor of permissible ripple current $I_{AC}$ versus frequency f









#### Taping, packing and lead configurations

#### **Taping**

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

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

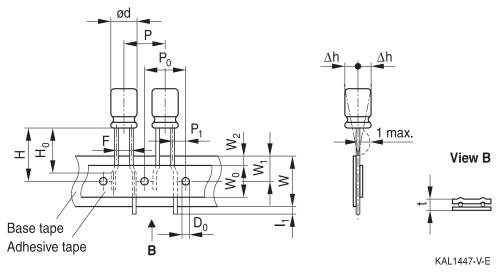
Lead spacing  $F = 5.0 \text{ mm} (\emptyset \text{ d} = 8 \dots 12.5 \text{ mm})$ 

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

The dimensions for F, P<sub>1</sub> and 1 max. are specified with reference to the center of the terminal wires.

#### 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 <sub>1</sub>	$W_2$	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	9.5	9.0	3.0	12.7	12.7	4.6	1.0	0.7	1.0	4.0
Toler-	+0.8	±1.0	±0.5	min.	±0.5	max.	±1.0	±0.3	±0.6	max.	±0.2	max.	±0.2
ance	-0.2												

Leads can also run straight through the taping area.

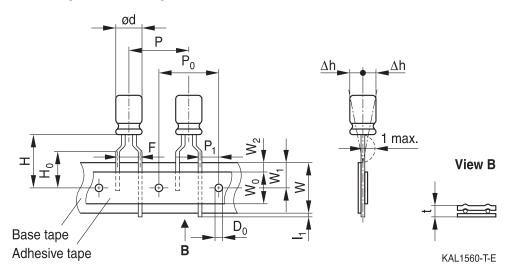




#### High ripple current - 125 °C

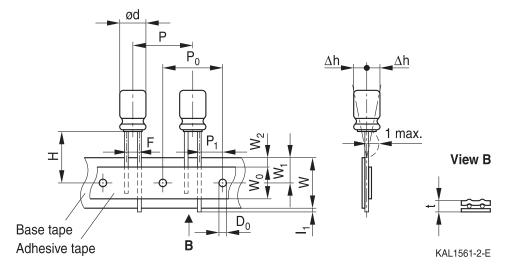
#### Lead spacing 5.0 mm ( $\emptyset$ d = 8 mm)

Last 3 digits of ordering code: 008



# Lead spacing 5.0 mm ( $\varnothing$ d = 10 ... 12.5 mm)

Last 3 digits of ordering code: 008



#### **Dimensions in mm**

$\emptyset$ 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>
8		20.0		9.5			16.0	12.7	12.7	3.85				
10	5.0	19.0	18.0	9.5	9.0	1.5	_	12.7	12.7	3.85	1.0	0.6	1.0	4.0
12.5		19.0		11.5			_	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  $d \times I = 12.5 \times 25$  mm.

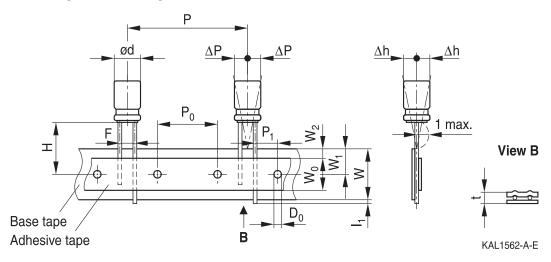






#### Lead spacing 7.5 mm ( $\varnothing$ d = 16 ...18 mm)

Last 3 digits of ordering code: 009



#### **Dimensions in mm**

$\emptyset$ d	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	2.75	1.0	0.7	0	0	4.0
18													U	
Toler-	±0.8	-0.5 +0.75	+0.5	min	+0.5	may	±1 0	+0.2	+0.5	may	+0.2	±1 0	±1 0	+0.2
ance		+0.75	0.5	111111.	10.5	max.	1.0	∪.∠	10.5	max.	∪.∠	1.0	1.0	∪.∠

Taping is available up to dimensions  $d \times I = 16 \times 31.5$  mm and  $18 \times 31.5$  mm.





# High ripple current - 125 $^{\circ}$ C

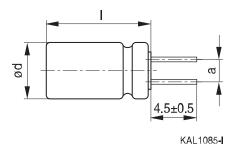
#### Cut or kinked leads

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

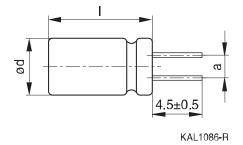
#### **Cut leads**

Last 3 digits of ordering code: 002

#### With stand-off rubber seal



#### With flat rubber seal



Case size	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



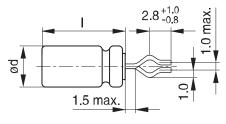
# High ripple current - 125 $^{\circ}\text{C}$



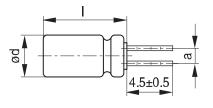
#### Kinked leads

Last 3 digits of ordering code: 001

#### With stand-off rubber seal

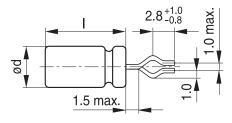


KAL1081-K

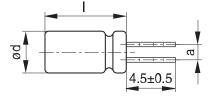


KAL1083-2

#### With flat rubber seal



KAL1082-T



KAL1084-A

Case size	Dimensions (mm)
$d \times I (mm)$	a ±0.5
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





#### High ripple current - 125 °C

#### PAPR leads (Protection Against Polarity Reversal)

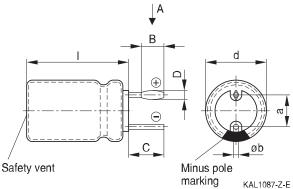
These lead configurations ensure correct placement of the capacitor on the PCB with regard to polarity. PAPR leads are available for diameters from 10 mm up to 18 mm (excluding  $d \times I = 12.5 \times 30/35/40$  mm).

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

#### **Crimped leads**

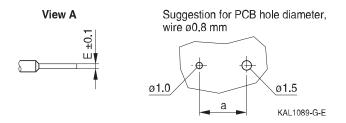
Last 3 digits of ordering code: 003

#### With stand-off rubber seal



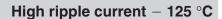
The series B41898 has no sleeve nor minus pole marking, the positive pole is marked on the aluminum case side instead.

#### Suggestion for PCB hole diameter



Case size	Dimension	Dimensions (mm)							
$d \times I (mm)$	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			

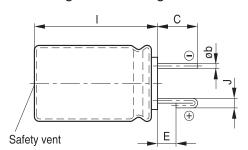


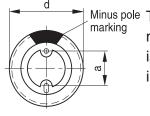




#### J leads

Last 3 digits of ordering code: 004





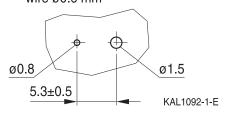
KAL1091-S-E

Minus pole marking

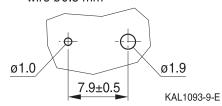
The series B41898 has no sleeve nor minus pole marking, the positive pole is marked on the aluminum case side instead.

#### Suggestion for PCB hole diameter

Suggestion for PCB hole diameter, wire  $\emptyset 0.6 \text{ mm}$ 



Suggestion for PCB hole diameter, wire  $\emptyset 0.8 \text{ mm}$ 



Case size	Dimensions (mm)							
$d \times I (mm)$	C ±0.5	E ±0.5	J ±0.2	a ±0.5	Øb			
10 × 12.5	3.2	0.7	1.2	5.0	0.6 ±0.05			
10 × 16	3.2	0.7	1.2	5.0	0.6 ±0.05			
10 × 20	3.2	0.7	1.2	5.0	0.6 ±0.05			
12.5 × 20	3.2	0.7	1.2	5.0	0.6 ±0.05			
12.5 × 25	3.2	0.7	1.2	5.0	0.6 ±0.05			
16 × 20	3.5	0.7	1.6	7.5	0.8 ±0.05			
16 × 25	3.5	0.7	1.6	7.5	0.8 ±0.05			
16 × 31.5	3.5	0.7	1.6	7.5	0.8 ±0.05			
16 × 35.5	3.5	0.7	1.6	7.5	0.8 ±0.05			
18 × 20	3.5	0.7	1.6	7.5	0.8 ±0.1			
18 × 25	3.5	0.7	1.6	7.5	0.8 ±0.1			
18 × 31.5	3.5	0.7	1.6	7.5	0.8 ±0.1			
18 × 35	3.5	0.7	1.6	7.5	0.8 ±0.1			

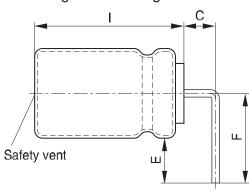


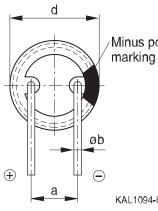


#### High ripple current - 125 °C

#### Bent 90° leads for horizontal mounting pinning

Last 3 digits of ordering code: 012





Minus pole The series B41898 has no sleeve nor minus pole marking, the positive pole is marked on the aluminum case side instead.

KAL1094-H-E

Case size	Dimension	Dimensions (mm)									
$d \times I (mm)$	C ±0.5	E ±0.5	F ±0.5	a ±0.5	∅b						
16 × 20	4.0	4.0	12.0	7.5	0.8 ±0.05						
16 × 25	4.0	4.0	12.0	7.5	0.8 ±0.05						
16 × 31.5	4.0	4.0	12.0	7.5	0.8 ±0.05						
16 × 35.5	4.0	4.0	12.0	7.5	0.8 ±0.05						
18 × 20	4.0	4.0	13.0	7.5	0.8 ±0.1						
18 × 25	4.0	4.0	13.0	7.5	0.8 ±0.1						
18 × 31.5	4.0	4.0	13.0	7.5	0.8 ±0.1						
18 × 35	4.0	4.0	13.0	7.5	0.8 ±0.1						
18 × 40	4.0	4.0	13.0	7.5	0.8 ±0.1						

Bent leads for diameter 12.5 mm available upon request.

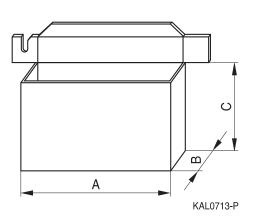






# Packing units and box dimensions

# Ammo pack



Case size	Dimens	Packing		
$d \times I$		units		
mm	$A_{\text{max}}$	$B_{max}$	C <sub>max</sub>	pcs.
8 × 11.5	345	60	240	1000
10 × 12.5	345	60	280	750
10×16	345	65	200	500
10 × 20	345	65	200	500
12.5 × 20	345	65	260	500
12.5 × 25	345	70	260	500
16 × 20	325	65	285	300
16 × 25	325	65	285	300
16 × 31.5	325	80	275	300
18 × 20	325	65	285	250
18 × 25	325	65	285	250
18 × 31.5	325	80	275	250



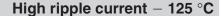


# High ripple current - 125 $^{\circ}$ C

# Overview of packing units and code numbers

								PAPR	
Case size	Stan-	Taped	,		Kinked	Cut	Crimped	J leads,	Bent 90°
$d \times I$	dard,	Ammo	pack		leads,	leads,	leads,	blister	leads,
	bulk				bulk	bulk	blister		blister
mm	pcs.	pcs.			pcs.	pcs.	pcs.	pcs.	pcs.
8 × 11.5	1000	1000			_	_	_	_	
10 × 12.5	1000	750			_	1000	_	900	
10 × 16	1000	500			_	1000	_	675	
10 × 20	500	500			500	500	_	500	
12.5 × 20	350	500			350	350	_	300	1)
12.5 × 25	250	500			500	500	_	225	1)
12.5 × 30	200	_			_	_	_	_	
12.5 × 35	175	_	_			_	_	_	
12.5 × 40	175	_	_			_	_	_	
16 × 20	250	300			200	200	200	200	420
16 × 25	250	300			200	200	216	216	216
16 × 31.5	200	300			250	250	180	180	180
16 × 35.5	100	_			100	100	150	150	150
18 × 20	175	250			175	175	200	200	420
18 × 25	150	250			150	150	200	200	200
18 × 31.5	100	250			100	100	150	150	150
18 × 35	100	_			100	100	150	150	150
18 × 40	125	_			100	100	72	_	72
The last three	000	Code	F (mm)	d (mm)	001	002	003	004	012
digits of the		006	3.5	8	1				
complete		800	5	812.5					
ordering code		009	7.5	1618					
state the lead									
configuration									







#### **Cautions and warnings**

#### **Personal safety**

The electrolytes used by EPCOS have been optimized both with a view to the intended application and with regard to health and environmental compatibility. They do not contain any solvents that are detrimental to health, e.g. dimethyl formamide (DMF) or dimethyl acetamide (DMAC).

Furthermore, some of the high-voltage electrolytes used by EPCOS are self-extinguishing.

As far as possible, EPCOS does 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 EPCOS aluminum electrolytic capacitors are continuously adapted in compliance with the EPCOS 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 the EPCOS website for all types listed in the data book. MDS for customer specific capacitors are available upon request.

MSDS (Material Safety Data Sheets) are available for all of our electrolytes upon request.

Nevertheless, the following rules should be observed when handling aluminum electrolytic 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.