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## Aluminum electrolytic capacitors

Single-ended capacitors

Series/Type: B43888 Date: December 2010

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#### Single-ended capacitors

Extended useful life - 105 °C

#### Long-life grade capacitors

#### Applications

- Professional electronic ballasts
- Power supplies
- Energy-saving lamps

#### Features

- Compact dimensions
- High ripple current capability at high frequency
- Very long useful life (8000 to 12000 h/105 °C)
- RoHS-compatible

#### Construction

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

#### **Delivery mode**

- Special terminal configurations and packing:
- Bulk
- Taped, Ammo pack
- Cut (see chapter "Single-ended Taping, packing and lead configurations, Cut leads (Chapter B)")
- Kinked (see chapter "Single-ended Taping, packing and lead configurations, Kinked leads (Chapter B)")
- 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.







B43888

#### Specifications and characteristics in brief

Rated voltage V <sub>R</sub>	160 45	50 V DC					
Surge voltage Vs	$1.1\cdot V_{\text{R}}$						
Rated capacitance C <sub>R</sub>	3.3 33	0 μF					
Capacitance tolerance	±20% ≙	М					
Dissipation factor tan $\delta$	$V_{\text{R}} \le 350$	V DC: tan δ (r	nax.) = 0.20				
(20 °C, 120 Hz)	$V_R \ge 400$	V DC: tan $\delta$ (r	max.) = 0.24				
Leakage current I <sub>leak</sub> (20 °C, 5 min)	I <sub>leak</sub> = 0.0	03 μΑ • ( <mark>C<sub>R</sub></mark> • -	V <sub>R</sub> V) + 15 μΑ	<u>v</u>			
Self-inductance ESL	Diameter	r (mm)	≤ 12.5	16	18	20	
	ESL (nH)	)	20	26	34	38	
Useful life						-	
105 °C; V <sub>R</sub> ; I <sub>AC,R</sub>	8000 h fc	or d = 10 mm					
105 °C; V <sub>R</sub> ; I <sub>AC,R</sub>	10000 h	for $d \ge 12.5 \text{ m}$	m and $V_R \ge 3$	350 V DC			
	12000 h	for d ≥ 12.5 m	m and $V_R \leq 1$	250 V DC			
Requirements	$\Delta C/C$	$\leq \pm 35\%$ of ini	tial value				
	tan δ	≤ 3 times initi	al specified	limit			
	I <sub>leak</sub>	≤ initial speci	fied limit				
Voltage endurance test							
105 °C; V <sub>R</sub>	8000 h fc	or d = 10 mm					
	10000 h	for d ≥ 12.5 m	m and $V_R \ge 3$	350 V DC			
	12000 h	for d ≥ 12.5 m	m and $V_R \leq 1$	250 V DC			
Post test requirements	∆C/C	$\leq$ ±25% of ini	tial value				
	tan δ	≤ 2 times initi	al specified	limit			
	I <sub>leak</sub>	≤ initial speci	fied limit				
Vibration resistance test	To IEC 6	0068-2-6, test	Fc:				
	Frequence	cy range 10 Hz	z 2 kHz, d	lisplacement	t amplitude	1.5 mm,	
	accelerat	tion max. 20 <i>g</i>	, duration 3	×2h.			
	Capacitor rigidly clamped by the aluminum case.						
IEC climatic category	To IEC 60068-1:						
		V: 40/105/56					
	$V_R \ge 350 \text{ V}: 25/105/56 (-25 \text{ °C}/+105 \text{ °C}/56 \text{ days damp heat test})$						
Sectional specification	IEC 60384-4						



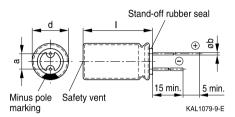


Extended useful life - 105 °C

#### **Dimensional drawings**

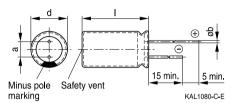
#### With stand-off rubber seal

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



### With flat rubber seal

Diameter (mm): 20



#### **Dimensions and weights**

Dimensions (m	m)			Approx. weight
d +0.5	1	a ±0.5	b	g
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	30 +2.0	5.0	0.80 ±0.05	5.3
12.5	35 +2.0	5.0	0.80 ±0.05	6.4
12.5	40 +2.0	5.0	0.80 ±0.05	7.4
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
18	20 +2.0	7.5	0.80 ±0.1	8.0
18	31.5 +2.0	7.5	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
20	40 +2.0	10.0	1.00 ±0.1	20.0



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#### Overview of available types

V <sub>R</sub> (V DC)	160	250	350	400	450
	Case dimens	ions d $\times$ l (mm)			
C <sub>R</sub> (μF)					
3.3			10 × 12.5	10 × 16	
4.7		10 × 12.5	10 × 12.5	10 × 16	10 × 16
6.8		10 × 16	10 × 16	10 ×20	10 ×20
10		10 × 16	10 × 20	12.5 × 20	12.5 × 20 12.5 × 25
15			12.5 × 20	12.5 × 25	12.5 × 25 12.5 × 30
22	10 × 16	12.5 × 20	12.5 × 25	12.5 × 30	12.5 × 35 18 × 20
33	10 ×20	12.5 × 25	16 × 25	16 × 31.5	16 × 31.5
47	12.5 × 20	12.5 × 30	16 × 31.5	18 × 31.5	18 × 35
68	12.5 × 25	12.5 × 40	18 × 31.5	18 × 40	
100	16 × 25	18 × 31.5	18 × 40		
150		18 ×40			
220	18 ×35				
330	20 ×40				

Other voltage and capacitance ratings are available upon request.



Extended useful life - 105 °C

#### Technical data and ordering codes

C <sub>R</sub>	Case dimensions	I <sub>AC,R</sub>	I <sub>AC,max</sub>	Ordering code
120 Hz	d×l	100 kHz	100 kHz	(composition see below)
20 °C	mm	105 °C	85 °C	
μF		mA	mA	
V <sub>R</sub> = 160 V D	С			L
22	10 × 16	380	646	B43888C1226M***
33	10 × 20	500	850	B43888C1336M***
47	12.5 × 20	750	1275	B43888C1476M***
68	12.5 × 25	1200	2040	B43888C1686M***
100	16 × 25	1450	2465	B43888C1107M***
220	18 × 35	2400	4080	B43888C1227M***
330	20 × 40	3200	5440	B43888C1337M***
V <sub>R</sub> = 250 V D	C			
4.7	10 × 12.5	160	272	B43888C2475M***
6.8	10 × 16	250	425	B43888C2685M***
10	10 × 16	320	544	B43888C2106M***
22	12.5 × 20	500	850	B43888C2226M***
33	12.5 × 25	800	1360	B43888C2336M***
47	12.5 × 30	1000	1700	B43888C2476M***
68	12.5 × 40	1300	2210	B43888C2686M***
100	18 × 31.5	1450	2465	B43888C2107M***
150	18 × 40	2000	3400	B43888C2157M***
V <sub>R</sub> = 350 V D	C			
3.3	10 × 12.5	120	204	B43888C4335M***
4.7	10 × 12.5	150	255	B43888C4475M***
6.8	10 × 16	280	476	B43888C4685M***
10	10 × 20	350	595	B43888C4106M***
15	12.5 × 20	600	1020	B43888C4156M***
22	12.5 × 25	700	1190	B43888C4226M***
33	16 × 25	900	1530	B43888C4336M***
47	16 × 31.5	1100	1870	B43888C4476M***
68	18 × 31.5	1500	2550	B43888C4686M***
100	18 × 40	1700	2890	B43888C4107M***

#### Composition of ordering code

\*\*\* = Version

- 000 = for standard leads, bulk
- 001 = for kinked leads, bulk (from d × l = 10 × 20 mm to 18 × 40 mm, excluding  $12.5 \times 30/35/40$  mm)
- 002 = for cut leads, bulk (excluding  $12.5 \times 30/35/40$  mm)
- 003 = for crimped leads, blister (from d  $\times$  l = 16  $\times$  25 mm to 20  $\times$  40 mm)
- 004 = for J leads, blister (from d  $\times$  l = 10  $\times$  12.5 mm to 18  $\times$  31.5 mm, excluding 12.5  $\times$  30/35/40 mm)
- 008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (from  $d \times I = 10 \times 16$  mm to  $12.5 \times 25$  mm)
- 009 = for taped leads, Ammo pack, lead spacing F = 7.5 mm (for  $\emptyset$  16 and 18  $\times$  20 ... 18  $\times$  31.5 mm)
- 012 = for bent 90° leads, blister (for  $\emptyset$  16 and 18 mm)



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#### Technical data and ordering codes

C <sub>R</sub>	Case dimensions	I <sub>AC.B</sub>	I <sub>AC,max</sub>	Ordering code
120 Hz	d×l	100 kHz	100 kHz	(composition see below)
20 °C	mm	105 °C	85 °C	
μF		mA	mA	
V <sub>R</sub> = 400 V	DC			
3.3	10 × 16	180	306	B43888C9335M***
4.7	10 × 16	220	374	B43888C9475M***
6.8	10 × 20	280	476	B43888C9685M***
10	12.5 × 20	350	595	B43888C9106M***
15	12.5 × 25	550	935	B43888C9156M***
22	12.5 × 30	750	1275	B43888C9226M***
33	16 × 31.5	900	1530	B43888C9336M***
47	18 × 31.5	1200	2040	B43888C9476M***
68	18 × 40	1500	2550	B43888C9686M***
V <sub>R</sub> = 450 V	DC			
4.7	10 × 16	180	306	B43888C5475M***
6.8	10 × 20	250	425	B43888C5685M***
10	12.5 × 20	450	765	B43888C5106M***
10	12.5 × 25	500	850	B43888D5106M***
15	12.5 × 25	500	850	B43888C5156M***
15	12.5 × 30	600	1020	B43888D5156M***
22	12.5 × 35	650	1105	B43888C5226M***
22	18 × 20	700	1190	B43888D5226M***
33	16 × 31.5	1000	1700	B43888C5336M***
47	18 × 35	1200	2040	B43888C5476M***

#### Composition of ordering code

\*\*\* = Version

000 = for standard leads, bulk

001 = for kinked leads, bulk (from d  $\times$  l = 10  $\times$  20 mm to 18  $\times$  40 mm, excluding 12.5  $\times$  30/35/40 mm)

002 = for cut leads, bulk (excluding  $12.5 \times 30/35/40$  mm)

003 = for crimped leads, blister (from  $d \times I = 16 \times 25$  mm to  $20 \times 40$  mm)

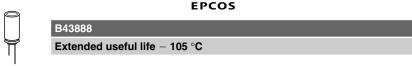
004 = for J leads, blister (from d × l = 10 × 12.5 mm to 18 × 31.5 mm, excluding 12.5 × 30/35/40 mm)

008 = for taped leads, Ammo pack, lead spacing F = 5.0 mm (from  $d \times I = 10 \times 16$  mm to  $12.5 \times 25$  mm)

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

012 = for bent 90° leads, blister (for  $\varnothing$  16 and 18 mm)

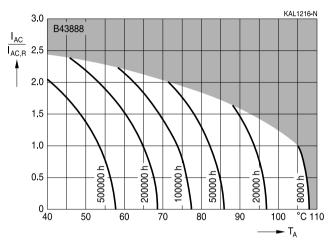


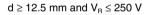


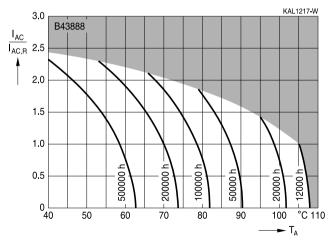
#### Useful life

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

d = 10 mm







<sup>1)</sup> Refer to chapter "General technical information, 5.3 Calculation of useful life" for an explanation on how to interpret the useful life graphs.

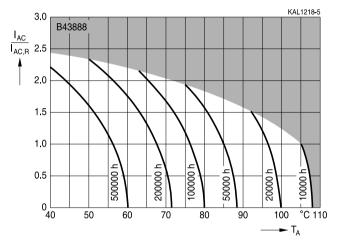


Extended useful life - 105 °C

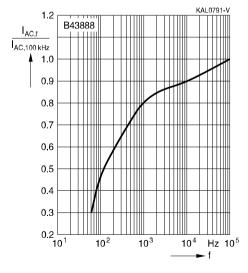
#### Useful life

depending on ambient temperature T<sub>A</sub> under ripple current operating conditions<sup>2)</sup>

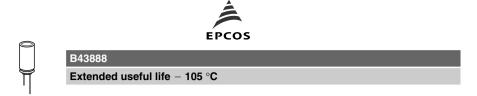
 $d \geq 12.5 \text{ mm}$  and  $V_{\text{R}} \geq 350 \text{ V}$ 



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



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



#### Taping, packing and lead configurations

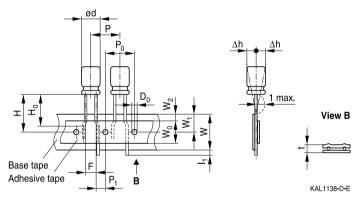
#### Taping

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

Lead spacing F = 2.0 mm ( $\oslash$  d = 4 ... 5 mm) Lead spacing F = 2.5 mm ( $\oslash$  d = 4 ... 6.3 mm) Lead spacing F = 3.5 mm ( $\oslash$  d = 8 mm) Lead spacing F = 5.0 mm ( $\oslash$  d = 4 ... 12.5 mm) Lead spacing F = 7.5 mm ( $\oslash$  d = 16 ... 18 mm).

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

Last 3 digits of ordering code: 016



#### **Dimensions in mm**

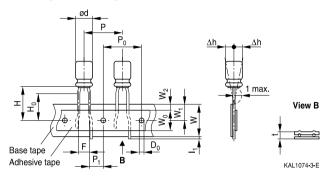
$\emptyset  d$	F	Н	W	W <sub>0</sub>	$W_1$	$W_2$	Р	P <sub>0</sub>	P <sub>1</sub>	$I_1$	t	$\Delta h$	D <sub>0</sub>
4 5		18.5					12.7				0.7	1	4.0
	+0.8 -0.2	±0.75	±0.5	min.	±0.5	max.	±1.0	±0.3	±0.7	max.	±0.2	±1.0	±0.2



Extended useful life - 105 °C

#### Lead spacing 2.5 mm (Ø d = 4 ... 6.3 mm)

Last 3 digits of ordering code: 007

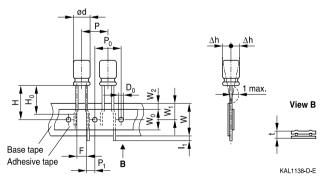


#### **Dimensions in mm**

Ød	F	Н	W	$W_0$	$W_1$	$W_2$	H <sub>0</sub>	Р	P <sub>0</sub>	P <sub>1</sub>	$I_1$	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	$\pm 0.75$	+0 F	min	+0 5	may	±0 5	+1.0	+0.2	+0 5	may	+0.2	may	+0.2
rance	-0.2	10.75	10.5		10.5	max.	10.5	±1.0	±0.2	10.5	max.	±0.2	max.	±0.2

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

Last 3 digits of ordering code: 006



#### Dimensions in mm

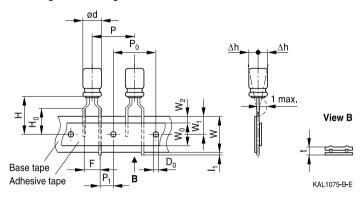
Ød	F	Н	W	W <sub>o</sub>	W <sub>1</sub>	$W_2$	Р	P <sub>0</sub>	P <sub>1</sub>	$I_1$	t	Δh	D <sub>0</sub>
8	3.5	18.5	18.0	10	9.0	3.0	12.7	12.7	4.6	1.0	0.7	1.0	4.0
Toler- ance	+0.8	+1.0	+0 5	min	+0 5	may	+1.0	+0.2	+0.6	may	+0.2	may	+0.2
ance	-0.2	±1.0	±0.5		±0.5	max.	±1.0	±0.3	±0.0	max.	±0.2	max.	±0.2

Leads can also run straight through the taping area. Taping is available up to dimensions  $d\times I=8\times 15$  mm.



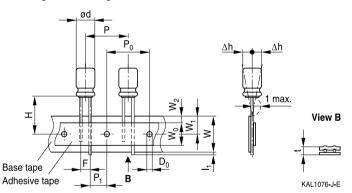
#### Lead spacing 5.0 mm ( $\emptyset$ d = 4 ... 8 mm)

Last 3 digits of ordering code: 008



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

Last 3 digits of ordering code: 008



#### Dimensions in mm

$\varnothing$ d	F	Н	W	$W_{0}$	$W_1$	<b>W</b> <sub>2</sub>	H₀	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	$\Delta h$	D <sub>0</sub>
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

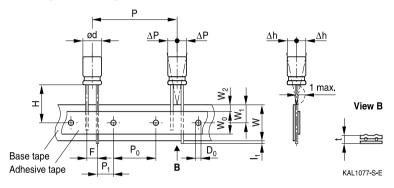
Taping is available up to dimensions d  $\times$  I = 12.5  $\times$  25 mm. Taping is not available for d  $\times$  I = 8  $\times$  20 mm.



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

Last 3 digits of ordering code: 009



#### **Dimensions in mm**

$\varnothing$ d	F	Н	W	$W_{0}$	$W_1$	$W_2$	Р	P <sub>0</sub>	P <sub>1</sub>	I <sub>1</sub>	t	$\Delta P$	$\Delta h$	$D_0$
16	7.5	10 E	10.0	12.5	0.0	1.5	20.0	15.0	0.75	10	0.7	0	0	4.0
18	7.5	10.5	10.0	12.5	9.0	1.5	30.0	15.0	3.75	1.0	0.7	0	0	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  $\times$  l = 16  $\times$  31.5 mm and 18  $\times$  31.5 mm.



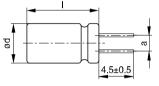
#### Cut or kinked leads

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 I (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

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

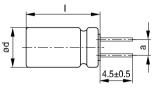


#### Cut leads (Chapter B)

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

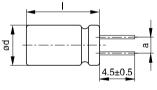
Last 3 digits of ordering code: 002

#### With stand-off rubber seal





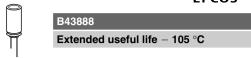
#### With flat rubber seal



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

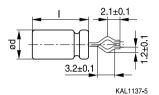


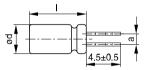


#### Kinked leads (Chapter A)

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

Last 3 digits of ordering code: 001





KAL1084-A

Case size d x I (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

	Dimensions
Case size d x l (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

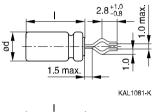


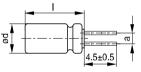
#### Kinked leads (Chapter B)

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

Last 3 digits of ordering code: 001

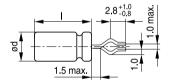
#### With stand-off rubber seal



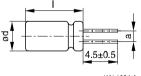


KAL1083-2

#### With flat rubber seal

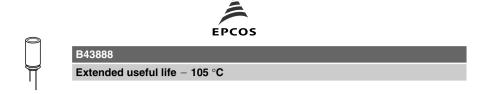






KAL1084-A

Casa siza	
Case size	Dimensions (mm)
$d \times l (mm)$	a ±0.5
10  imes 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



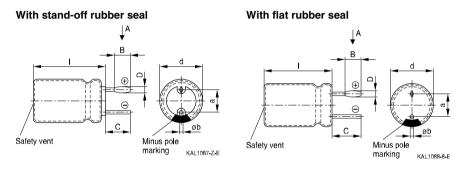
#### PAPR leads (Protection Against Polarity Reversal)

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

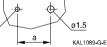


#### Suggestion for PCB hole diameter

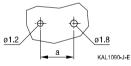
ø1.0



Suggestion for PCB hole diameter. wire ø0.8 mm



Suggestion for PCB hole diameter, wire ø1.0 mm



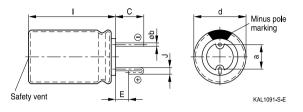
Case size	Dimensio	Dimensions (mm)						
$d \times I$ (mm)	B ±0.2	C ±0.5	D ±0.1	E ±0.1	a ±0.5	Øb		
16×20	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05		
16×25	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05		
16×31.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05		
16 × 35.5	1.5	3.0	1.3	0.3	7.5	0.8 ±0.05		
18×20	1.5	3.0	1.3	0.3	7.5	0.8 ±0.1		
18 × 25	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		



Extended useful life - 105 °C

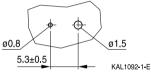
#### J leads

Last 3 digits of ordering code: 004

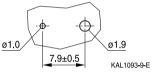


#### Suggestion for PCB hole diameter

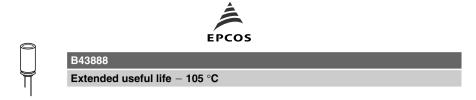
Suggestion for PCB hole diameter, wire  $\emptyset 0.6 \text{ mm}$ 



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

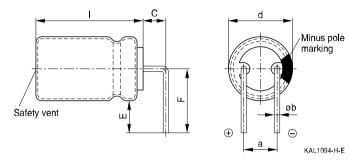


Case size	Dimension	Dimensions (mm)						
d × l (mm)	C ±0.5	E ±0.5	J ±0.2	a ±0.5	Øb			
10 × 12.5	3.2	0.7	1.2	5.0	0.6 ±0.05			
10×16	3.2	0.7	1.2	5.0	0.6 ±0.05			
10×20	3.2	0.7	1.2	5.0	0.6 ±0.05			
12.5 × 20	3.2	0.7	1.2	5.0	0.6 ±0.05			
12.5 × 25	3.2	0.7	1.2	5.0	0.6 ±0.05			
16×20	3.5	0.7	1.6	7.5	0.8 ±0.05			
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			



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

Last 3 digits of ordering code: 012



Case size	Dimensions	Dimensions (mm)					
d  imes I (mm)	C ±0.5	E ±0.5	F ±0.5	a ±0.5	Øb		
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  imes 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.

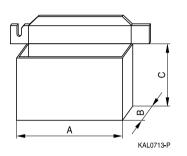


B43888

#### Packing units and box dimensions

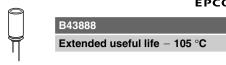
#### Ammo pack

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



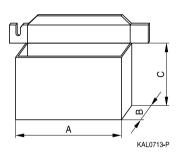
Case size d × l	Dimer	Dimensions (mm)					
mm	A <sub>max</sub>	A <sub>max</sub> B <sub>max</sub> C <sub>max</sub>					
4×7	330	50	196	2000			
5×7	330	50	226	2000			
5×11	330	50	226	2000			
6.3×7	330	50	286	2000			
6.3 × 11	330	50	286	2000			
8×7	330	50	246	1000			
8×11.5	330	50	246	1000			
8×15	330	50	246	500			
10 × 12.5	330	50	196	500			
10 × 16	330	54	196	500			
10×20	330	58	196	500			
12.5  imes 20	341	60	272	500			
12.5  imes 25	341	65	272	500			
16×25	320	65	270	300			
16×31.5	315	65	275	300			
18×20	315	65	275	250			
18×25	315	65	275	250			
18  imes 31.5	315	65	275	250			





#### Ammo pack

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



Case size $d \times I$	Dimens	Dimensions (mm)				
mm	A <sub>max</sub>	B <sub>max</sub>	C <sub>max</sub>	pcs.		
8×11.5	345	55	240	1000		
10  imes 12.5	345	55	280	750		
10 × 16	345	60	200	500		
10×20	345	60	200	500		
12.5  imes 20	345	65	280	500		
12.5  imes 25	345	65	280	500		
16×20	315	65	275	300		
16 × 25	315	65	275	300		
16  imes 31.5	315	65	275	300		
18×20	315	65	275	250		
18 × 25	315	65	275	250		
18×31.5	315	65	275	250		



B43888

#### Overview of packing units and code numbers for case sizes 4 x 7 ... 16 x 40

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

Case size	Standard,	Taped,			Kinked leads,	Cut leads,
dxl	bulk	Ammo pack			bulk	bulk
mm	pcs.	pcs.			pcs.	pcs.
4 x 7	10000	2000			15000	15000
5 x 7	7500	2000			10000	10000
5 x 11	5000	2000			10000	10000
6.3 x 7	5000	2000			10000	10000
6.3 x 11	5000	2000			5000	5000
8 x 7	5000	1000			5000	5000
8 x 11.5	2500	1000			4000	4000
8 x 15	2000	1000			2500	2500
8 x 20	1500	_			2000	2000
10 x 12.5	2000	500			2500	2500
10 x 16	1500	500			2000	2000
10 x 20	1000	500			1500	1500
10 x 25	1000	500			1250	1250
12.5 x 16	750	500			1000	1000
12.5 x 20	750	500			500	500
12.5 x 25	750	500			500	500
12.5 x 31.5	500	-			750	750
12.5 x 35.5	500	-			750	750
12.5 x 40	500	-			750	750
16 x 20	375	300			500	500
16 x 25	375	300			500	500
16 x 31.5	250	300			375	375
16 x 35.5	250	_			375	375
16 x 40	250	_			375	375
The last three	000	Code	F (mm)	d (mm)	001	002
digits of the		006	3.5	8		
complete		007	2.5	4 6.3		
ordering code		800	5.0	4 12.5		
state the lead		009	7.5	16 18		
configuration		016	2.0	4 5		





Extended useful life - 105 °C

#### Overview of packing units and code numbers for case sizes 18 x 20 ... 18 x 40

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

Case size	Standard,	Taped,			Kinked leads,	Cut leads,
dxl	bulk	Ammo pack			bulk	bulk
mm	pcs.	pcs.			pcs.	pcs.
18 x 20	250	250			100	100
18 x 25	250	250			100	100
18 x 31.5	250	250			100	100
18 x 35.5	250	-			100	100
18 x 40	250	-			100	100
The last three	000	Code	F (mm)	d (mm)	001	002
digits of the		009	7.5	16 18		
complete						
ordering code						
state the lead						
configuration						



B43888

#### Overview of packing units and code numbers for case sizes $8 \times 11.5 \dots 16 \times 35.5$

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

								PAPR	
Case size	Stan-	Taped	l,		Kinked	Cut	Crimped	J leads,	Bent 90°
$d \times I$	dard,	Ammo	o 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	-	675	
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	120
16×25	250	300			200	200	200	200	120
16×31.5	200	300			250	250	344	344	120
16×35.5	100	-			100	100	150	150	150
The last three	000	Code	F (mm)	d (mm)	001	002	003	004	012
digits of the		006	3.5	8					
complete		008	5	512.5					
ordering code		009	7.5	1618					
state the lead									
configuration									