



# Aluminum Electrolytic Capacitors

Capacitors with screw terminals

**Series/Type:** B43713, B43733

**Date:** June 27, 2018

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## Long life grade capacitors

### 长寿命级电容器

#### Applications

##### 应用

- Frequency converters  
变频器
- Wind power converters/Solar inverters  
风能/太阳能逆变器
- Uninterruptible power supplies  
不间断电源
- Professional power supplies  
高端电源

#### Features

##### 特点

- Extra long useful life high ripple current capability  
超长寿命，高耐纹波电流能力
- Self-extinguishing electrolyte  
阻燃电解液
- All-welded constructions ensure reliable electrical contact  
全焊结构，确保可靠的电气接触性
- PAPR terminals available (Protection Against Polarity reversal)  
可选PAPR型端子（带极性颠倒保护）
- RoHS-compatible  
符合RoHS要求

#### Construction

##### 结构

- Poles with screw terminal connections  
螺栓连接电极
- Mounting with ring clips, clamps or threaded stud  
采用卡夹/卡环或底部螺栓安装
- Type with threaded stud are available with or without insulated base  
带螺栓的型号可选底部绝缘或者不绝缘

**Capacitors with screw terminals 螺栓式电容器 B43713, B43733**

**Extra long useful life - 85 °C 超长寿命型 - 85 °C**

**Specifications and characteristics in brief**

**规格性能参数一览表**

Rated voltage $V_R$ 额定电压 $V_R$	200 ... 500 V DC		
Surge voltage $V_S$ 浪涌电压 $V_S$	1.15 · $V_R$ (for $V_R \leq 250$ V DC) 1.10 · $V_R$ (for $V_R \geq 350$ V DC)		
Operating temperature range 工作温度范围	-40 °C ... +85 °C		
Rated capacitance $C_R$ 额定电容量 $C_R$ (20 °C, 120 Hz)	820 ... 33000 $\mu$ F		
Capacitance tolerance 电容量公差	$\pm 20\%$ (M)		
Dissipation factor (max.) 损耗正切角(最大值) 20 °C, 120 Hz.	$\leq 0.2$		
Leakage current $I_{leak}$ (20 °C, after 5 minutes) 漏电流 $I_{leak}$ (20 °C, 5分钟后)	$I_{leak} \leq 0.020 \mu A \cdot \left( \frac{C_R}{\mu F} \cdot \frac{V_R}{V} \right)^{0.85} + 4 \mu A$		
Useful life 使用寿命 (85 °C, $V_R$ , $I_{AC,R}$ )	200 ... 450V	500 V	Requirements 要求: $\Delta C/C \leq \pm 15\%$ of initial value 初始值的 $\pm 15\%$ $\tan \delta \leq 1.75$ times initial specified limit 1.75倍初始规定值 $I_{leak} \leq$ initial specified limit 初始规定值
	15000	12000	
Temperature & frequency multiplier for rated ripple current 额定纹波电流温度/频率系数	Specific part number's Temperature and Frequency multipliers are available in our on-line AICap Useful Life Calculation Tool, which please click the hyperlink as below: 个别料号纹波电流的温度和频率系数可从我们网络寿命工具获取, 链接如下: <a href="https://www.epcos-china.com/epcos-zh/524040/design-support/design-tools/aluminum-electrolytic-capacitors/alcap-useful-life-calculation-tool">https://www.epcos-china.com/epcos-zh/524040/design-support/design-tools/aluminum-electrolytic-capacitors/alcap-useful-life-calculation-tool</a>		
Sectional specification 分规范	IEC 60384-4		

\*In general, each specified part number has individual Frequency and temperature multipliers. Please refer to the AICap Useful Life Calculation Tool, available from EPCOS web page (Design Support > Design Tools > Aluminum Electrolytic Capacitors > AICap Useful Life Calculation Tool).

\*每个电容器都有各自的额定纹波电流的频率和温度系数, 具体计算请使用在EPCOS官网上的铝电解电容寿命计算工具。

**Ripple current capability**
**耐纹波电流能力**

Due to the ripple current capability of the contact elements, the following current upper limits must not be exceeded:

因为接触元件的耐纹波电流能力限制，工作电流不得超过下表的极限值

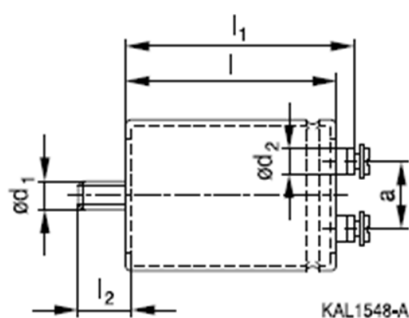
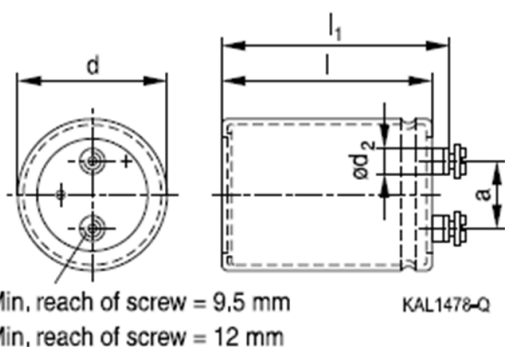
Capacitor diameter 电容器直径	51.6 mm	64.3 mm	76.9 mm	90 mm
$I_{AC,max}$	34 A	57 A	74 A	89 A

**Dimensional drawings**
**尺寸图**
**B43713**

Ring clip/clamp mounting  
卡环或卡夹安装

**B43733**

Threaded stud mounting  
底部螺栓安装



M5: Min. reach of screw = 9.5 mm

M5: 螺纹最小深度 = 9.5 mm

M6: Min. reach of screw = 12 mm

M6: 螺纹最小深度 = 12 mm

Positive pole marking: +

正极标志: +

For standard types with threaded stud the bases is not insulated. Also refer to the mounting instructions in chapter "Capacitors with screw terminals - Accessories".

带底部螺栓的标准型号，底部不绝缘。安装说明，参阅章节“螺钉式电容器 - 附件”。

Screw terminals with UNF threads are available upon request.

带UNF螺纹的螺钉产品可以供应

The can is insulated with one sleeve layer

铝壳以单层套管绝缘

**Dimensions and weights**
**尺寸与重量**

Terminal 端子	Dimensions (mm) with insulating sleeve 带绝缘套管的尺寸(mm)							Approx. weight (g) 约计重量(克)
	d	$l \pm 1$	$l_1 \pm 1$	$l_2 +0/ -1$	$d_1$	$d_2 \text{ max.}$	$a +0.2/-0.4$	
M5	51.6 +0.5/-1	80.7	87.2	17	M12	10.2	22.2	220
		96.7	103.2					250
		105.7	112.2					280
		118.2	124.7					320
		130.7	137.2					350
M5	64.3 +0.5/-1	80.7	87.2	17	M12	13.2	28.5	370
		96.7	103.2					400
		105.7	112.2					440
		118.2	124.7					510
		130.7	137.2					600
M6	76.9 +0.5/-1	143.2	149.7	17	M12	17.7	31.7	630
		96.7	102.5					570
		105.7	111.5					620
		118.2	124.0					700
		130.7	136.5					800
		143.2	149.0					840
		156.2	162.0					920
168.7	174.5	1000						
M6	90.0 +0.5/-1.5	190.7	196.5	17	M12	17.7	31.7	1150
		220.7	226.5					1300
		120.0	125.3					1000
		144.5	149.8					1200
		170.0	175.3					1400
		197.0	102.3					1700
		221.0	226.3					1900

**Accessories**
**附件**

The following items are included in the delivery package, but are not fastened to the capacitors:

以下物品已包含在交货包装中，但没有固定到电容器上：

	Thread 螺纹	Toothed washers 带齿垫圈	Screws/nuts 螺钉或螺帽	Maximum torque 最大扭矩
For terminals 用于端子	M5	A5.1 DIN6797	DIN 7985 / ISO 7045-M5 * 10-5.6-Z	2.5 Nm thread depth $t \geq 8$ mm
	M6	A6.4 DIN6797	DIN 7985 / ISO 7045-M6 * 12-5.6-Z	4.0 Nm thread depth $t \geq 9.5$ mm
For mounting <sup>1)</sup> 用于安装 <sup>1)</sup>	M12	J 12.5 DIN 6797	Hex nut BM 12 DIN 439 六角螺母 BM 12 DIN 439	10 Nm

The following items must be ordered separately. For details, refer to chapter "Screw terminals – accessories"

以下物品需要另外购买。详情参阅章节“螺钉式电容器—附件”。

Item 物品	Type 型号
Ring clips 卡环	B44030
Clamps for capacitors with $d \geq 64.3$ mm 电容器用卡夹, $d \geq 64.3$ mm	B44030
Insulating parts 绝缘部件	B44020

<sup>1)</sup>with different mounting method, this item is not always required. it will be delivered upon customer request accordingly.

由于安装方式不同，该配件不一定都适用。仅当客户提出需求时，EPCOS将配送该部件。

**Technical datas and ordering codes 技术参数与订货编码**

$V_R$	$C_R$ 120 Hz 20 °C $\mu F$	Case dimensions d x l mm	$ESR_{typ}$ 120 Hz 20 °C m $\Omega$	$I_{AC,R}$ 120 Hz 85 °C A	Ordering code
$V_{DC}$					
200	3300	51.6 x 80.7	50	8.92	B437*3A2338M0##
200	3900	51.6 x 96.7	40	10.10	B437*3A2398M0##
200	4700	51.6 x 105.7	34	11.30	B437*3A2478M0##
200	4700	64.3 x 80.7	34	11.80	B437*3B2478M0##
200	5600	51.6 x 118.2	30	12.70	B437*3A2568M0##
200	5600	64.3 x 96.7	28	13.3	B437*3B2568M0##
200	6800	64.3 x 96.7	24	14.4	B437*3A2688M0##
200	8200	64.3 x 118.2	20	16.6	B437*3A2828M0##
200	8200	76.9 x 96.7	19	18.6	B437*3B2828M0##
200	10000	64.3 x 130.7	17	18.6	B437*3A2109M0##
200	10000	76.9 x 105.7	16	20.8	B437*3B2109M0##
200	12000	76.9 x 118.2	14	23.1	B437*3A2129M0##
200	15000	76.9 x 143.2	11	26.7	B437*3A2159M0##
200	15000	90 x 120	11	29.4	B437*3B2159M0##
200	18000	76.9 x 156.2	9.2	29.7	B437*3A2189M0##
200	18000	90 x 144.5	8.9	32.9	B437*3B2189M0##
200	22000	76.9 x 190.7	7.6	35.1	B437*3A2229M0##
200	22000	90 x 170	7.3	37.2	B437*3B2229M0##
200	27000	76.9 x 220.7	6.3	40.2	B437*3A2279M0##
200	27000	90 x 197	6.1	42.0	B437*3B2279M0##
200	33000	90 x 221	5.1	47.3	B437*3A2339M0##

**Composition of ordering code**
**订货编码规则**

\*= Mounting style 装配方式

 1 = for capacitors with ring clip/clamp  
mounting

带卡环固定的电容器

3 = for capacitors with threaded stud

带底部螺栓电容器

## = Design 设计

00 = for standard capacitors 标准型号

08 = insulation base 底部绝缘

50 = for terminals with PAPR style PAPR型端子

58 = PAPR with insulation base

PAPR 端子加底部绝缘

**Technical datas and ordering codes 技术参数与订货编码**

$V_R$	$C_R$ 120 Hz 20 °C $\mu F$	Case dimensions d x l mm	$ESR_{typ}$ 120 Hz 20 °C m $\Omega$	$I_{AC,R}$ 120 Hz 85 °C A	Ordering code
$V_{DC}$					
250	2700	51.6 x 80.7	55	7.56	B437*3E2278M0##
250	3300	51.6 x 80.7	45	8.16	B437*3E2338M0##
250	3900	51.6 x 105.7	34	10.10	B437*3E2398M0##
250	3900	64.3 x 80.7	34	10.40	B437*3F2398M0##
250	4700	51.6 x 130.7	28	11.70	B437*3E2478M0##
250	4700	64.3 x 96.7	28	11.90	B437*3F2478M0##
250	5600	64.3 x 96.7	24	12.80	B437*3E2568M0##
250	6800	64.3 x 118.2	20	14.80	B437*3E2688M0##
250	6800	76.9 x 96.7	19	16.5	B437*3F2688M0##
250	8200	64.3 x 130.7	17	16.6	B437*3E2828M0##
250	8200	76.9 x 105.7	16	18.3	B437*3F2828M0##
250	10000	76.9 x 118.2	13	20.6	B437*3E2109M0##
250	10000	90 x 120	13	23.5	B437*3F2109M0##
250	12000	76.9 x 143.2	11	23.4	B437*3E2129M0##
250	12000	90 x 120	11	25.7	B437*3F2129M0##
250	15000	76.9 x 168.7	8.9	27.7	B437*3E2159M0##
250	15000	90 x 144.5	8.7	29.4	B437*3F2159M0##
250	18000	76.9 x 190.7	7.5	31.3	B437*3E2189M0##
250	18000	90 x 170	7.3	32.9	B437*3F2189M0##
250	22000	76.9 x 220.7	6.3	36.0	B437*3E2229M0##
250	22000	90 x 197	6.1	37.2	B437*3F2229M0##
250	27000	90 x 221	5	42.3	B437*3E2279M0##

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PAPR 端子加底部绝缘



**Technical datas and ordering codes 技术参数与订货编码**

$V_R$	$C_R$ 120 Hz 20 °C $\mu F$	Case dimensions d x l mm	$ESR_{typ}$ 120 Hz 20 °C m $\Omega$	$I_{AC,R}$ 120 Hz 85 °C A	Ordering code
350	1500	51.6 x 80.7	80	6.78	B437*3A4158M0##
350	1800	51.6 x 96.7	65	7.72	B437*3A4188M0##
350	2200	51.6 x 105.7	55	8.75	B437*3A4228M0##
350	2200	64.3 x 80.7	55	9.10	B437*3B4228M0##
350	2700	51.6 x 118.2	45	10.00	B437*3A4278M0##
350	2700	64.3 x 80.7	45	10.00	B437*3B4278M0##
350	3300	64.3 x 96.7	36	11.50	B437*3A4338M0##
350	3900	64.3 x 105.7	30	12.70	B437*3A4398M0##
350	3900	76.9 x 96.7	30	14.3	B437*3B4398M0##
350	4700	64.3 x 130.7	26	14.6	B437*3A4478M0##
350	4700	76.9 x 96.7	26	15.8	B437*3B4478M0##
350	5600	64.3 x 143.2	22	16.3	B437*3A4568M0##
350	5600	76.9 x 118.2	20	17.8	B437*3B4568M0##
350	6800	76.9 x 130.7	17	20.0	B437*3A4688M0##
350	6800	90 x 120	17	22.2	B437*3B4688M0##
350	8200	76.9 x 156.2	15	22.5	B437*3A4828M0##
350	8200	90 x 120	14	24.5	B437*3B4828M0##
350	10000	76.9 x 168.7	12	26.2	B437*3A4109M0##
350	10000	90 x 144.5	12	27.8	B437*3B4109M0##
350	12000	76.9 x 220.7	10	29.9	B437*3A4129M0##
350	15000	90 x 197	8.3	35.5	B437*3A4159M0##
350	18000	90 x 221	7	40.0	B437*3A4189M0##

**Composition of ordering code**
**订货编码规则**

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PAPR 端子加底部绝缘

**Technical datas and ordering codes 技术参数与订货编码**

$V_R$	$C_R$ 120 Hz 20 °C $\mu\text{F}$	Case dimensions d x l mm	$\text{ESR}_{\text{typ}}$ 120 Hz 20 °C m $\Omega$	$I_{\text{AC,R}}$ 120 Hz 85 °C A	Ordering code
400	1500	51.6 x 80.7	80	6.77	B437*3A9158M0##
400	1800	51.6 x 96.7	65	7.73	B437*3A9188M0##
400	2200	51.6 x 105.7	55	8.77	B437*3A9228M0##
400	2200	64.3 x 80.7	55	9.09	B437*3B9228M0##
400	2700	51.6 x 118.2	45	10.00	B437*3A9278M0##
400	2700	64.3 x 80.7	45	10.00	B437*3B9278M0##
400	3300	64.3 x 96.7	38	11.50	B437*3A9338M0##
400	3900	64.3 x 105.7	32	12.70	B437*3A9398M0##
400	3900	76.9 x 96.7	30	14.3	B437*3B9398M0##
400	4700	64.3 x 130.7	26	14.7	B437*3A9478M0##
400	4700	76.9 x 96.7	26	15.8	B437*3B9478M0##
400	5600	64.3 x 143.2	22	16.4	B437*3A9568M0##
400	5600	76.9 x 118.2	22	17.8	B437*3B9568M0##
400	6800	76.9 x 130.7	18	20.1	B437*3A9688M0##
400	6800	90 x 120	17	22.2	B437*3B9688M0##
400	8200	76.9 x 168.7	13	24.8	B437*3A9828M0##
400	8200	90 x 120	15	24.5	B437*3B9828M0##
400	10000	76.9 x 220.7	11	28.5	B437*3A9109M0##
400	10000	90 x 144.5	12	27.9	B437*3B9109M0##
400	12000	90 x 197	9.1	33.0	B437*3A9129M0##
400	15000	90 x 221	7.4	38.4	B437*3A9159M0##

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PAPR 端子加底部绝缘

**Technical datas and ordering codes 技术参数与订货编码**

$V_R$	$C_R$ 120 Hz 20 °C $\mu F$	Case dimensions d x l mm	$ESR_{typ}$ 120 Hz 20 °C m $\Omega$	$I_{AC,R}$ 120 Hz 85 °C A	Ordering code
450	1000	51.6 x 80.7	110	5.60	B437*3A5108M0##
450	1200	51.6 x 96.7	95	6.35	B437*3A5128M0##
450	1500	51.6 x 105.7	75	7.36	B437*3A5158M0##
450	1500	64.3 x 80.7	75	7.62	B437*3B5158M0##
450	1800	51.6 x 130.7	65	8.44	B437*3A5188M0##
450	1800	64.3 x 96.7	65	8.56	B437*3B5188M0##
450	2200	64.3 x 105.7	50	9.71	B437*3A5228M0##
450	2700	64.3 x 118.2	40	11.10	B437*3A5278M0##
450	2700	76.9 x 96.7	40	12.0	B437*3B5278M0##
450	3300	64.3 x 143.2	34	12.7	B437*3A5338M0##
450	3300	76.9 x 105.7	34	13.6	B437*3B5338M0##
450	3900	76.9 x 118.2	30	15.1	B437*3A5398M0##
450	4700	76.9 x 143.2	24	17.1	B437*3A5478M0##
450	4700	90 x 120	24	18.6	B437*3B5478M0##
450	5600	76.9 x 156.2	20	19.2	B437*3A5568M0##
450	5600	90 x 144.5	20	20.6	B437*3B5568M0##
450	6800	76.9 x 190.7	17	22.5	B437*3A5688M0##
450	6800	90 x 170	17	23.2	B437*3B5688M0##
450	8200	76.9 x 220.7	14	25.7	B437*3A5828M0##
450	8200	90 x 170	14	26.3	B437*3B5828M0##
450	10000	90 x 221	11	29.8	B437*3A5109M0##
500	820	51.6 x 80.7	120	4.97	B437*3A6827M0##
500	1000	51.6 x 96.7	100	5.69	B437*3A6108M0##
500	1200	51.6 x 105.7	85	6.44	B437*3A6128M0##
500	1200	64.3 x 80.7	85	6.65	B437*3B6128M0##
500	1500	51.6 x 130.7	65	7.56	B437*3A6158M0##
500	1500	64.3 x 96.7	65	7.66	B437*3B6158M0##
500	1800	64.3 x 105.7	55	8.61	B437*3A6188M0##
500	2200	64.3 x 118.2	45	9.81	B437*3A6228M0##
500	2200	76.9 x 96.7	45	10.60	B437*3B6228M0##
500	2700	64.3 x 143.2	38	11.30	B437*3A6278M0##
500	2700	76.9 x 105.7	36	12.10	B437*3B6278M0##
500	3300	76.9 x 130.7	30	13.70	B437*3A6338M0##
500	3900	76.9 x 143.2	26	15.3	B437*3A6398M0##
500	4700	90 x 144.5	22	18.6	B437*3A6478M0##

**Composition of ordering code**
**订货编码规则**

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mounting

带卡环固定的电容器

3 = for capacitors with threaded stud

带底部螺栓电容器

## = Design 设计

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58 = PAPER with insulation base

PAPER 端子加底部绝缘

Bar code label and marking of the capacitor 条形码标签和电容器标签

Below is an example of bar code label on package:

以下为包装箱上条形码标签示例:

Brand 品牌

**EPCOS** Alum Elect Capacitor RoHS Compatible  
6800µF/400V/76.9X143mm Screw

(1P) PROD ID: **B43310B9688A001**

(9K) PROD ORDER NO: **171115129** (D) D/C: **171218**

(T) BATCH NO: **X517121526** NO: **029** (Q) QTY: **12**

Made in China

(1P) Ordering code 订购代码  
(9K) Product order number 订单号  
(D) Date code (yywwdd) 日期代码 (年月日)  
(T) Batch number 批号  
(Q) Quantity 数量

The example below shows how the capacitor sleeve are marked:

以下示例说明电容器套管上的标签内容:

**EPCOS** Logo 标志

B43310-B9688-A1 Part number (ordering code) 料号 (订购代码)

6800 µF (A) Rated capacitance, tolerance (in coded form) 额定电容、容差 (代码形式)

400V- 25/085/56 Rated voltage, climatic category 额定电压、气候分类

06.09 X Month and year of production 月.年 (生产日期)

## Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
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