Aluminum Electrolytic Capacitors

Capacitors with screw terminals

Series/Type: **B43320, B43340**

Date: April 1, 2014

Long life grade capacitors
长寿命级电容器

Applications
应用

- Uninterruptiple power supplies
  不间断电源
- Frequency converters
  变频器
- Solar and wind power generator
  太阳能和风力发电设备
- Switch mode power supplies in industrial and medical electronics
  工业和医疗电子产品中的开关电源

Features
特点

- All-welded constructions ensure reliable elecrical contact
  全焊结构，确保可靠的电气接触性
- High reliability and high ripple current capability
  高可靠性与高耐纹波电流能力
- RoHS-compatible
  符合RoHS要求

Construction
结构

- Charge/discharge-proof, polar
  耐充放电，有极性
- Aluminum case with insulating sleeve
  铝质外壳，带绝缘套管
- Poles with screw terminal connections
  螺钉连接电极
- Mounting with ring clips, clamps or threaded stud
  采用卡夹/卡环或底部螺栓安装

Capacitors with screw terminals 螺钉式电容器 **B43320,B43340**

Long life industrial − 85ºC 长寿命工业型 − 85ºC

Specifications and characteristics in brief
规格性能参数一览表

Rated voltage V_R 额定电压V_R	350…450 V DC				
Surge voltage V_S 浪涌电压V_S	$1.10 \cdot V_R$				
Operating temperature range 工作温度范围	-40 ºC…+85 ºC				
Rated capacitance C_R 额定电容量C_R (20 ºC,120 Hz)	1000…18000 µF				
Capacitance tolerance 电容量公差	±20% M				
Dissipation factor(max.) 损耗正切角（最大值） 20ºC,120Hz.	0.2				
Leakage current I_{leak} (20 ºC,after 5 minutes) 漏电流 I_{leak} (20 ºC,5分钟后)	$I_{leak} \leq 0.008\mu A \cdot (\frac{C_R}{\mu F} \cdot \frac{V_R}{V})$ or 5 mA whichever is smaller (5 mA或取更小值)				
Low temperature stability 低温稳定性 (max impedance ratio) (最大阻抗比率)	V_R(V DC)	350	400	450	
	$\frac{Z\ (-40\ ºC)}{Z\ (+20\ ºC)}$	22	20	16	
Useful life 使用寿命 (85 ºC,V_R,$I_{AC,R}$)	5000 h	Requirements 要求:			
		△C/C	⩽ ±15% of initial value 初始值的±15%		
		tanδ	≤ 1.75 times initial specified limit 1.75倍初始规定值		
		I_{leak}	≤ initial specified limit 初始规定值		
Shelf life 储存寿命	After storage for 1000 h at 85 ºC, the capacitors shall meet the requirement of useful life test after reforming process. After test: V_R to be applied for 30 minutes, 24 to 48 hours before measurement. 85ºC高温贮存1000小时，并预处理后，电容器必须符合使用寿命测试中对其电性能的要求。预处理方法：先加额定电压充电30分钟，恢复24至48小时后再测试。				

Frequency multiplier for rated ripple current 额定纹波电流频率系数	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
	0.68	1.00	1.22	1.36	1.40
Temperature multiplier for rated ripple current 额定纹波电流温度系数	+40 ºC	+55 ºC	+70 ºC	+85 ºC	
	1.92	1.75	1.46	1.00	

Sectional specification 分规范	IEC 60384-4

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 exceed:

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

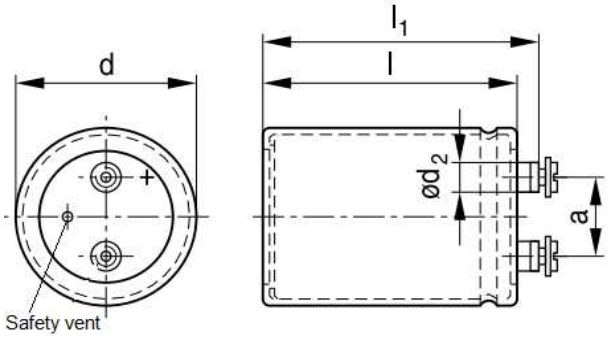
Capacitor diameter 电容器直径	51.6mm	64.3mm	76.9mm	91.0mm
$I_{AC,max}$	34A	45A	57A	80A

Dimensional drawings
尺寸图

B43320

Ring clip/clamp mounting

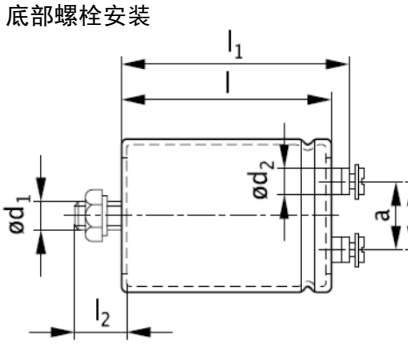
卡环或卡夹安装



B43340

Threaded stud mounting

底部螺栓安装



M5: Min. reach of screw = 8 mm

M5: 螺纹最小深度 = 8 mm

M6: Min. reach of screw = 10 mm

M6: 螺纹最小深度 = 10 mm

Positive pole marking: +

正极标志: +

The base of types with threaded stud is fully insulated.

带底部螺栓型号底部完全绝缘。

The can is insulated with two sleeve layers.

铝壳以双层套管绝缘。

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 +3/ -0	l_1 +3/ -0	l_2 +0/ -1	d_1	d_2 max.	a +0.2/-0.4	
M5	51.6 +0/-0.8	75 96 130	81 102 136	17	M12	11.4	22.2	230 290 360
M5	64.3 +0/-0.8	96 115 130 155 195	101.2 120.2 135.2 160.2 200.2	17	M12	13.2	28.5	415 505 555 655 865
M6	76.9 +0/-0.7	115 130 155	120.2 135.2 160.2	17	M12	17.7	31.7	640 790 1010
M6	91.0 +0/-2	157 196 236	161.8 200.8 240.8	17	M12	17.7	31.7	1430 1630 2230

Packing
包装

Capacitor diameter 电容器直径	Packing units (pcs.) 包装单位 (件)
51.6mm	22
64.3mm	15

Capacitor diameter 电容器直径	Packing units (pcs.) 包装单位 (件)
76.9mm	12
91.0mm	8

For ecological reasons the packing is pure cardboard.
为保护生态环境，包装仅使用纸板.

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 torqu 最大扭矩
For terminals 用于端子	M5	-	Outer hex-cross screw with spring and plain washer M5 × 10 外六角十字型螺钉及弹垫垫圈和平垫圈 M5 × 10	2.5 Nm
	M6	-	Outer hex-cross screw with spring and plain washer M6 × 12 外六角十字型螺钉及弹垫垫圈和平垫圈 M6 × 12	4.0 Nm
For mounting[1)] 用于安装[1)]	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 ≥ 64.3 mm 电容器用卡夹, d ≥ 64.3 mm	B44030
Insulating parts 绝缘部件	B44020

[1)] 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 dates and ordering codes

V_R V DC	C_R 120Hz 20 ºC µF	Case dimensions d × l mm	ESR_{typ} 120 Hz 20 ℃ mΩ	$I_{AC,max}$ 120 Hz 40 ºC A	$I_{AC,R}$ 120 Hz 85 ºC A	Ordering code
350	1200	51.6 x 75	100	12.2	5.8	B433*0A4128M0#0
	1500	51.6 x 75	80	14.1	6.7	B433*0A4158M0#0
	1800	51.6 x 96	65	15.9	7.6	B433*0A4188M0#0
	2200	51.6 x 96	55	18.2	8.6	B433*0A4228M0#0
	2700	51.6 x 130	45	21.1	10.1	B433*0B4278M0#0
	3300	51.6 x 130	36	24.3	11.5	B433*0A4338M0#0
	3900	64.3 x 115	30	27.2	12.9	B433*0A4398M0#0
	4700	64.3 x 130	24	31.4	15.5	B433*0A4478M0#0
	5600	64.3 x 155	20	35.4	17.6	B433*0A4568M0#0
	5600	76.9 x 115	20	35.5	17.6	B433*0C4568M0#0
	6800	64.3 x 195	17	40.8	20.3	B433*0D4688M0#0
	6800	76.9 x 130	17	40.1	19.8	B433*0C4688M0#0
	8200	76.9 x 155	15	45.3	22.4	B433*0A4828M0#0
	10000	91.0 x 157	12	51.3	27.0	B433*0A4109M0#0
	12000	91.0 x 157	10	57.9	30.3	B433*0A4129M0#0
	15000	91.0 x 196	8	67.1	35.2	B433*0A4159M0#0
	18000	91.0 x 236	7	76.0	39.9	B433*0B4189M0#0
400	1000	51.6 x 75	110	11.5	5.5	B433*0A9108M0#0
	1200	51.6 x 75	90	13.0	6.2	B433*0A9128M0#0
	1500	51.6 x 96	70	15.1	7.2	B433*0A9158M0#0
	1800	51.6 x 96	60	17.1	8.1	B433*0A9188M0#0
	2200	51.6 x 130	50	19.8	9.4	B433*0A9228M0#0
	2700	64.3 x 96	40	23.0	10.9	B433*0A9278M0#0
	3300	64.3 x 115	34	26.2	12.4	B433*0A9338M0#0
	3900	64.3 x 130	28	29.4	13.9	B433*0A9398M0#0
	4700	64.3 x 155	24	33.5	15.9	B433*0A9478M0#0
	4700	76.9 x 115	24	33.5	15.9	B433*0C9478M0#0
	5600	64.3 x 195	20	38.0	18.1	B433*0B9568M0#0
	5600	76.9 x 130	20	37.5	17.8	B433*0C9568M0#0
	6800	76.9 x 155	16	44.7	21.2	B433*0A9688M0#0
	8200	91.0 x 157	14	47.8	24.1	B433*0A9828M0#0
	10000	91.0 x 157	11	54.9	27.5	B433*0A9109M0#0
	12000	91.0 x 196	9	61.8	31.1	B433*0A9129M0#0
	15000	91.0 x 236	8	72.2	36.3	B433*0B9159M0#0

* = Mounting style
2 = for capacitors with ring clip/clamp mounting
4 = for capacitors with threaded stud

\# = Insulation feature
0 = PVC insulation
6 = PET insulation

Technical dates and ordering codes

V_R V DC	C_R 120Hz 20 ºC µF	Case dimensions d × l mm	ESR_{typ} 120 Hz 20 ℃ mΩ	$I_{AC,max}$ 120 Hz 40 ºC A	$I_{AC,R}$ 120 Hz 85 ºC A	Ordering code
450	1000	51.6 x 75	95	12.2	5.8	B433*0A5108M0#0
	1200	51.6 x 96	80	13.7	6.5	B433*0A5128M0#0
	1500	51.6 x 115	65	16.0	7.6	B433*0A5158M0#0
	1800	51.6 x 130	55	18.3	8.7	B433*0A5188M0#0
	2200	64.3 x 96	45	21.2	10.1	B433*0A5228M0#0
	2700	64.3 x 115	36	24.3	11.5	B433*0A5278M0#0
	3300	64.3 x 130	30	27.8	13.2	B433*0A5338M0#0
	3900	64.3 x 155	24	31.3	14.9	B433*0A5398M0#0
	3900	76.9 x 115	24	31.5	14.9	B433*0C5398M0#0
	4700	64.3 x 195	20	35.8	17.1	B433*0D5478M0#0
	4700	76.9 x 130	20	35.5	16.8	B433*0C5478M0#0
	5600	76.9 x 155	17	41.5	19.7	B433*0A5568M0#0
	6800	91.0 x 157	14	44.8	22.6	B433*0A5688M0#0
	8200	91.0 x 157	12	51.1	25.6	B433*0A5828M0#0
	10000	91.0 x 196	10	58.2	29.2	B433*0A5109M0#0
	12000	91.0 x 236	8	65.9	33.2	B433*0B5129M0#0

* = Mounting style
2 = for capacitors with ring clip/clamp mounting
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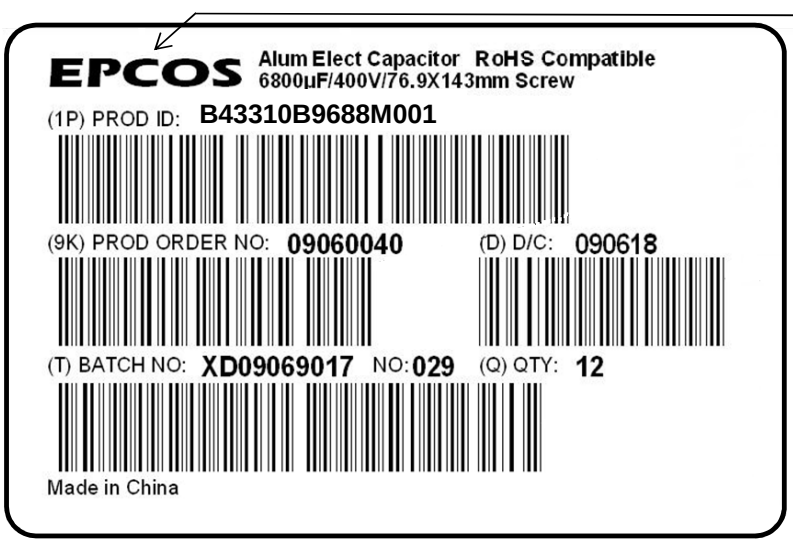
Bar code label and marking of the capacitor 条形码标签和电容器标签

Below is an example of bar code label on package:
以下为包装箱上条形码标签示例：



(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-M1	Part number (ordering code)	料号（订购代码）
6800 µF (M)	Rated capacitance, tolerance (in coded form)	额定电容、容差（代码形式）
400 V- 40/085/56	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）

The climatic category is specified according to IEC 60068–1. If there is not enough space on the case, the following codes may be used:
气候类别符合IEC 60068－1。如果壳体上没有足够空间，可使用以下代码：
E.g.: 40/085/56, in coded form, would read GPF 例如：40/085/56的代码形式为GPF
1st letter (lower category temperature) 首字母（下限类别温度）

Code letter 代码字母	F	G	H
Temperature 温度(℃)	-55	-40	-25

2nd letter (upper category temperature) 第二字母（上限类别温度）

Code letter 代码字母	K	M	P	S	U
Temperature 温度(℃)	+125	+105(+100)	+85	+70	+60

3rd letter (humidity) 第三字母（湿度）

Letter F: withstands IEC60068-2-78 Cab (damp heat, steady state), test duration 56 days.
字母F：经受IEC 60068-2-78试验箱（湿热、恒稳态），试验周期56天。

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