



# **Aluminum electrolytic capacitors**

## Alu-X product lines

Snap-in capacitors

**Series/Type:** B41252, B43252  
**Date:** April 2008

## General-purpose grade capacitors

### Applications

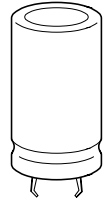
- Switch-mode power supplies in industrial and entertainment electronics

### Features

- High ripple current capability
- RoHS-compatible
- Load life of 2000 h at 105 °C

### Construction

- Aluminum case, fully insulated
- Snap-in solder pins to hold component in place on PC-board
- Minus pole marking on the insulating sleeve
- Case with safety vent



**Specifications and characteristics in brief**

Rated voltage $V_R$	10 ... 500 V DC											
Operating temperature range	$V_R \leq 250$ V DC: $-40$ °C ... $+105$ °C $V_R \geq 315$ V DC: $-25$ °C ... $+105$ °C											
Rated capacitance $C_R$ (20 °C, 120 Hz)	47 ... 56000 $\mu$ F											
Capacitance tolerance	$\pm 20\% \triangleq M$											
Load life (105 °C, $V_R$ , $I_{AC,R}$ )	2000 h		Requirements: $\Delta C/C \leq \pm 20\%$ of initial value $\tan \delta \leq 2$ times initial specified limit $I_{leak} \leq$ initial specified limit									
Leakage current $I_{leak}$ (20 °C, after 5 minutes)	$I_{leak} \leq 0.02 \mu A \cdot \left( \frac{C_R}{\mu F} \cdot \frac{V_R}{V} \right)$											
Dissipation factor (max.) (20 °C, 120 Hz)	$V_R$ (V DC)	10	16	25	35	50	63 ... 80	100	160 ... 200	250 ... 400	450 ... 500	
	$\tan \delta$	0.45	0.35	0.30	0.20	0.20	0.15	0.15	0.12	0.15	0.20	
Low temperature stability (impedance ratio) (120 Hz)	$V_R$ (V DC)	10 ... 16		25	35	50 ... 63		80 ... 100		160 ... 200	250 ... 400	450 ... 500
	$\frac{Z(-25 \text{ °C})}{Z(+20 \text{ °C})}$	4		3	3	2		2		3	4	8
	$\frac{Z(-40 \text{ °C})}{Z(+20 \text{ °C})}$	15		10	8	6		5		6	–	–
Shelf life	After storage for 1000 h at 105 °C, the capacitors shall meet the requirement of load life test after reforming process. After test: $V_R$ to be applied for 30 minutes, 24 to 48 hours before measurement.											
Frequency multiplier for rated ripple current		50 Hz		120 Hz		1 kHz		10 kHz		20 kHz		
	$\leq 50$ V	0.95		1.00		1.10		1.15		1.15		
	63 ... 100 V	0.95		1.00		1.16		1.30		1.33		
	$> 100$ V	0.90		1.00		1.20		1.50		1.55		
Temperatur multiplier for rated ripple current	$+40$ °C	$+55$ °C			$+70$ °C			$+85$ °C			$+105$ °C	
	2.7	2.5			2.1			1.7			1.0	

Dimensional drawing



\* = Shorter terminal ( $4.0 \pm 0.5$ ) is also available upon request.

**Overview of available types B41252**

$V_R$ (V DC)	10	16	25	35
	Case dimensions d × l (mm)			
$C_R$ (μF)				
3300				22 × 25
3900				22 × 30
4700			22 × 25	22 × 35 25.4 × 25
5600			22 × 30	22 × 35 25.4 × 30 30 × 25
6800			22 × 30	22 × 40 25.4 × 35 30 × 30
8200		22 × 25	22 × 35 25.4 × 30	22 × 50 25.4 × 40 30 × 30
10000	22 × 25	22 × 30 25.4 × 25	22 × 40 25.4 × 35	25.4 × 45 30 × 35
12000	22 × 30	22 × 35 25.4 × 30 30 × 25	22 × 45 25.4 × 40 30 × 30	25.4 × 50 30 × 40 35 × 30
15000	22 × 35 25.4 × 25	22 × 40 25.4 × 35 30 × 30	25.4 × 45 30 × 35 35 × 30	30 × 45 35 × 35
18000	22 × 35 25.4 × 30	22 × 45 25.4 × 40 30 × 30	25.4 × 50 30 × 40 35 × 35	35 × 40
22000	22 × 40 25.4 × 35 30 × 25	25.4 × 45 30 × 35	30 × 45 35 × 35	35 × 45
27000	22 × 50 25.4 × 40 30 × 30	25.4 × 50 30 × 40 35 × 30	35 × 45	
33000	25.4 × 45 30 × 35	30 × 45 35 × 35		
39000	25.4 × 50 30 × 40 35 × 30	30 × 50 35 × 40		
47000	30 × 45 35 × 35	35 × 45		
56000	35 × 45			

**Overview of available types B41252**

$V_R$ (V DC)	50	63	80	100
	Case dimensions $d \times l$ (mm)			
$C_R$ ( $\mu$ F)				
820			22 × 25	22 × 30 25.4 × 25
1000			22 × 30 25.4 × 25	22 × 35 25.4 × 30
1200		22 × 25	22 × 30 25.4 × 25	22 × 40 25.4 × 35 30 × 25
1500		22 × 30 25.4 × 25	22 × 35 25.4 × 30	22 × 45 25.4 × 40 30 × 30
1800		22 × 30 25.4 × 25	22 × 40 25.4 × 35 30 × 25	25.4 × 45 30 × 35
2200		22 × 35 25.4 × 30	22 × 45 25.4 × 35 30 × 30	25.4 × 50 30 × 40 35 × 30
2700	22 × 30	22 × 40 25.4 × 30 30 × 25	25.4 × 45 30 × 35	30 × 45 35 × 35
3300	22 × 35	22 × 50 25.4 × 40 30 × 30	25.4 × 50 30 × 40 35 × 30	30 × 50 35 × 40
3900	22 × 40 25.4 × 35 30 × 25	25.4 × 45 30 × 35	30 × 45 35 × 35	35 × 45
4700	22 × 45 25.4 × 40 30 × 30	25.4 × 50 30 × 40 35 × 30	30 × 50 35 × 40	35 × 50
5600	22 × 50 25.4 × 40 30 × 35	30 × 45 35 × 35	35 × 45	
6800	25.4 × 50 30 × 40 35 × 30	30 × 50 35 × 40	35 × 50	
8200	30 × 45 35 × 35	35 × 45		
10000	30 × 50 35 × 40	35 × 50		
12000	35 × 45			
15000	35 × 50			

**Overview of available types B43252**

$V_R$ (V DC)	160	200	250	315
	Case dimensions d × l (mm)			
$C_R$ (μF)				
82				22 × 20
100				22 × 25 25.4 × 20
120				22 × 30 25.4 × 25 30 × 20
150		22 × 20	22 × 25 25.4 × 20	22 × 35 25.4 × 30 30 × 20
180	22 × 20	22 × 20	22 × 25 25.4 × 20 30 × 20	22 × 40 25.4 × 35 30 × 25 35 × 20
220	22 × 20	22 × 25 25.4 × 20	22 × 30 25.4 × 25 30 × 20	22 × 45 25.4 × 35 30 × 30 35 × 20
270	22 × 25 25.4 × 20	22 × 30 25.4 × 25 30 × 20	22 × 35 25.4 × 30 30 × 25 35 × 20	25.4 × 45 30 × 35 35 × 25
330	22 × 25 25.4 × 25 30 × 20	22 × 30 25.4 × 25 30 × 20	22 × 40 25.4 × 30 30 × 25 35 × 20	25.4 × 50 30 × 40 35 × 30
390	22 × 30 25.4 × 25 30 × 20	22 × 35 25.4 × 30 30 × 25 35 × 20	22 × 45 25.4 × 40 30 × 30 35 × 25	30 × 45 35 × 35
470	22 × 35 25.4 × 25 30 × 25 35 × 20	22 × 40 25.4 × 35 30 × 25 35 × 25	22 × 50 25.4 × 40 30 × 30 35 × 25	30 × 50 35 × 40
560	22 × 40 25.4 × 30 30 × 25 35 × 25	22 × 45 25.4 × 40 30 × 30 35 × 25	25.4 × 50 30 × 35 35 × 30	35 × 40
680	22 × 45 25.4 × 35 30 × 25 35 × 25	22 × 50 25.4 × 45 30 × 30 35 × 25	30 × 45 35 × 35	35 × 50

**Overview of available types B43252**

$V_R$ (V DC)	160	200	250	315
	Case dimensions $d \times l$ (mm)			
$C_R$ ( $\mu$ F)				
820	22 $\times$ 50 25.4 $\times$ 40 30 $\times$ 30 35 $\times$ 25	25.4 $\times$ 50 30 $\times$ 35 35 $\times$ 30	35 $\times$ 40	
1000	25.4 $\times$ 45 30 $\times$ 35 35 $\times$ 30	30 $\times$ 45 35 $\times$ 35	35 $\times$ 45	
1200	25.4 $\times$ 50 30 $\times$ 40 35 $\times$ 30	30 $\times$ 50 35 $\times$ 35	35 $\times$ 50	
1500	35 $\times$ 40	35 $\times$ 45		



**Overview of available types B43252**

$V_R$ (V DC)	350	400	450	500
	Case dimensions $d \times l$ (mm)			
$C_R$ ( $\mu$ F)				
47			22 × 20	22 × 25 25.4 × 20
56		22 × 20	22 × 25 25.4 × 20	22 × 30 25.4 × 30 30 × 20
68	22 × 20	22 × 25 25.4 × 20	22 × 30 25.4 × 25 30 × 20	22 × 40 25.4 × 35 30 × 25 35 × 20
82	22 × 25 25.4 × 20	22 × 30 25.4 × 25 30 × 20	22 × 35 25.4 × 30 30 × 20	22 × 45 25.4 × 40 30 × 30 35 × 25
100	22 × 25 25.4 × 25 30 × 20	22 × 35 25.4 × 30 30 × 20	22 × 40 25.4 × 30 30 × 25 35 × 20	22 × 50 25.4 × 45 30 × 35 35 × 30
120	22 × 30 25.4 × 25 30 × 20	22 × 40 25.4 × 30 30 × 25 35 × 20	22 × 45 25.4 × 35 30 × 30 35 × 25	25.4 × 50 30 × 40 35 × 30
150	22 × 40 25.4 × 30 30 × 25 35 × 20	22 × 45 25.4 × 35 30 × 30 35 × 20	22 × 50 25.4 × 40 30 × 30 35 × 25	30 × 45 35 × 35
180	22 × 45 25.4 × 35 30 × 30 35 × 20	22 × 50 25.4 × 40 30 × 30 35 × 25	25.4 × 45 30 × 35 35 × 30	30 × 50 35 × 40
220	22 × 50 25.4 × 40 30 × 30 35 × 25	25.4 × 45 30 × 35 35 × 30	25.4 × 50 30 × 40 35 × 30	35 × 45
270	25.4 × 45 30 × 35 35 × 30	25.4 × 50 30 × 40 35 × 30	30 × 45 35 × 35	35 × 50
330	30 × 40 35 × 35	30 × 45 35 × 35	30 × 50 35 × 40	
390	30 × 45 35 × 40	30 × 50 35 × 40	35 × 45	
470	35 × 45	35 × 45	35 × 50	
560	35 × 50	35 × 50		

**Technical data and ordering codes B41252**

$V_R$	$C_R$ 120 Hz 20 °C $\mu F$	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
10	10000	22 × 25	2.17	B41252A3109M000
	12000	22 × 30	2.48	B41252A3129M000
	15000	22 × 35	2.83	B41252A3159M000
	15000	25.4 × 25	2.75	B41252B3159M000
	18000	22 × 35	3.00	B41252A3189M000
	18000	25.4 × 30	3.11	B41252B3189M000
	22000	22 × 40	3.35	B41252A3229M000
	22000	25.4 × 35	3.48	B41252B3229M000
	22000	30 × 25	3.38	B41252C3229M000
	27000	22 × 50	3.88	B41252A3279M000
	27000	25.4 × 40	3.87	B41252B3279M000
	27000	30 × 30	3.79	B41252C3279M000
	33000	25.4 × 45	4.26	B41252A3339M000
	33000	30 × 35	4.20	B41252B3339M000
	39000	25.4 × 50	4.60	B41252A3399M000
	39000	30 × 40	4.57	B41252B3399M000
	39000	35 × 30	4.46	B41252C3399M000
	47000	30 × 45	4.95	B41252A3479M000
	47000	35 × 35	4.87	B41252B3479M000
	56000	35 × 45	5.49	B41252A3569M000
16	8200	22 × 25	2.14	B41252A4828M000
	10000	22 × 30	2.48	B41252A4109M000
	10000	25.4 × 25	2.56	B41252B4109M000
	12000	22 × 35	2.80	B41252A4129M000
	12000	25.4 × 30	2.90	B41252B4129M000
	12000	30 × 25	2.97	B41252C4129M000
	15000	22 × 40	3.17	B41252A4159M000
	15000	25.4 × 35	3.29	B41252B4159M000
	15000	30 × 30	3.38	B41252C4159M000
	18000	22 × 45	3.50	B41252A4189M000
	18000	25.4 × 40	3.65	B41252B4189M000
	18000	30 × 30	3.57	B41252C4189M000
	22000	25.4 × 45	4.03	B41252A4229M000
	22000	30 × 35	3.98	B41252B4229M000
	27000	25.4 × 50	4.42	B41252A4279M000
	27000	30 × 40	4.39	B41252B4279M000
	27000	35 × 30	4.29	B41252C4279M000
	33000	30 × 45	4.79	B41252A4339M000
	33000	35 × 35	4.71	B41252B4339M000
	39000	30 × 50	5.16	B41252A4399M000
	39000	35 × 40	5.10	B41252B4399M000
	47000	35 × 45	5.50	B41252A4479M000

**Technical data and ordering codes B41252**

$V_R$	$C_R$ 120 Hz 20 °C	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
25	4700	22 × 25	1.73	B41252A5478M000
	5600	22 × 30	1.98	B41252A5568M000
	6800	22 × 30	2.14	B41252A5688M000
	8200	22 × 35	2.42	B41252A5828M000
	8200	25.4 × 30	2.50	B41252B5828M000
	10000	22 × 40	2.77	B41252A5109M000
	10000	25.4 × 35	2.88	B41252B5109M000
	12000	22 × 45	3.09	B41252A5129M000
	12000	25.4 × 40	3.22	B41252B5129M000
	12000	30 × 30	3.15	B41252C5129M000
	15000	25.4 × 45	3.62	B41252A5159M000
	15000	30 × 35	3.57	B41252B5159M000
	15000	35 × 30	3.65	B41252C5159M000
	18000	25.4 × 50	3.98	B41252A5189M000
	18000	30 × 40	3.95	B41252B5189M000
	18000	35 × 35	4.06	B41252C5189M000
	22000	30 × 45	4.36	B41252A5229M000
22000	35 × 35	4.28	B41252B5229M000	
27000	35 × 45	4.92	B41252A5279M000	
35	3300	22 × 25	1.26	B41252A7338M000
	3900	22 × 30	1.88	B41252B7398M000
	4700	22 × 35	2.14	B41252A7478M000
	4700	25.4 × 25	2.09	B41252B7478M000
	5600	22 × 35	2.29	B41252A7568M000
	5600	25.4 × 30	2.37	B41252B7568M000
	5600	30 × 25	2.43	B41252C7568M000
	6800	22 × 40	2.61	B41252A7688M000
	6800	25.4 × 35	2.71	B41252B7688M000
	6800	30 × 30	2.79	B41252C7688M000
	8200	22 × 50	3.02	B41252A7828M000
	8200	25.4 × 40	3.02	B41252B7828M000
	8200	30 × 30	2.95	B41252C7828M000
	10000	25.4 × 45	3.43	B41252A7109M000
	10000	30 × 35	3.38	B41252B7109M000
	12000	25.4 × 50	3.78	B41252A7129M000
	12000	30 × 40	3.75	B41252B7129M000
	12000	35 × 30	3.67	B41252C7129M000
	15000	30 × 45	4.19	B41252A7159M000
	15000	35 × 35	4.12	B41252B7159M000
18000	35 × 40	4.52	B41252A7189M000	
22000	35 × 45	4.95	B41252A7229M000	

**Technical data and ordering codes B41252**

V <sub>R</sub>	C <sub>R</sub> 120 Hz 20 °C μF	Case dimensions d × l mm	I <sub>AC,R</sub> 120 Hz 105 °C A	Ordering code
50	2700	22 × 30	1.94	B41252A6278M000
	3300	22 × 35	2.20	B41252A6338M000
	3900	22 × 40	2.52	B41252A6398M000
	3900	25.4 × 35	2.62	B41252B6398M000
	3900	30 × 25	2.54	B41252C6398M000
	4700	22 × 45	2.81	B41252A6478M000
	4700	25.4 × 40	2.93	B41252B6478M000
	4700	30 × 30	2.87	B41252C6478M000
	5600	22 × 50	3.11	B41252A6568M000
	5600	25.4 × 40	3.11	B41252B6568M000
	5600	30 × 35	3.21	B41252C6568M000
	6800	25.4 × 50	3.64	B41252A6688M000
	6800	30 × 40	3.61	B41252B6688M000
	6800	35 × 30	3.53	B41252C6688M000
	8200	30 × 45	3.94	B41252A6828M000
	8200	35 × 35	3.87	B41252B6828M000
	10000	30 × 50	4.42	B41252A6109M000
10000	35 × 40	4.37	B41252B6109M000	
12000	35 × 45	4.78	B41252A6129M000	
15000	35 × 50	5.24	B41252A6159M000	
63	1200	22 × 25	1.37	B41252A8128M000
	1500	22 × 30	1.50	B41252A8158M000
	1500	25.4 × 25	1.54	B41252B8158M000
	1800	22 × 30	1.64	B41252A8188M000
	1800	25.4 × 25	1.69	B41252B8188M000
	2200	22 × 35	1.86	B41252A8228M000
	2200	25.4 × 30	1.92	B41252B8228M000
	2700	22 × 40	2.17	B41252A8278M000
	2700	25.4 × 30	2.13	B41252B8278M000
	2700	30 × 25	2.18	B41252C8278M000
	3300	22 × 50	2.53	B41252A8338M000
	3300	25.4 × 40	2.53	B41252B8338M000
	3300	30 × 30	2.48	B41252C8338M000
	3900	25.4 × 45	2.88	B41252A8398M000
	3900	30 × 35	2.84	B41252B8398M000
	4700	25.4 × 50	3.20	B41252A8478M000
	4700	30 × 40	3.17	B41252B8478M000
	4700	35 × 30	3.10	B41252C8478M000

**Technical data and ordering codes B41252**

$V_R$	$C_R$ 120 Hz 20 °C	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
63	5600	30 × 45	3.51	B41252A8568M000
	5600	35 × 35	3.46	B41252B8568M000
	6800	30 × 50	3.92	B41252A8688M000
	6800	35 × 40	3.88	B41252B8688M000
	8200	35 × 45	4.22	B41252A8828M000
	10000	35 × 50	4.74	B41252A8109M000
80	820	22 × 25	1.37	B41252A0827M000
	1000	22 × 30	1.62	B41252A0108M000
	1000	25.4 × 25	1.67	B41252B0108M000
	1200	22 × 30	1.67	B41252A0128M000
	1200	25.4 × 25	1.72	B41252B0128M000
	1500	22 × 35	1.98	B41252A0158M000
	1500	25.4 × 30	2.05	B41252B0158M000
	1800	22 × 40	2.28	B41252A0188M000
	1800	25.4 × 35	2.37	B41252B0188M000
	1800	30 × 25	2.30	B41252C0188M000
	2200	22 × 45	2.51	B41252A0228M000
	2200	25.4 × 35	2.49	B41252B0228M000
	2200	30 × 30	2.56	B41252C0228M000
	2700	25.4 × 45	3.03	B41252A0278M000
	2700	30 × 35	2.99	B41252B0278M000
	3300	25.4 × 50	3.33	B41252A0338M000
	3300	30 × 40	3.30	B41252B0338M000
	3300	35 × 30	3.23	B41252C0338M000
	3900	30 × 45	3.75	B41252A0398M000
	3900	35 × 35	3.69	B41252B0398M000
	4700	30 × 50	4.10	B41252A0478M000
4700	35 × 40	4.06	B41252B0478M000	
5600	35 × 45	4.44	B41252A0568M000	
6800	35 × 50	4.90	B41252A0688M000	
100	820	22 × 30	1.46	B41252A9827M000
	820	25.4 × 25	1.51	B41252B9827M000
	1000	22 × 35	1.71	B41252A9108M000
	1000	25.4 × 30	1.77	B41252B9108M000
	1200	22 × 40	1.86	B41252A9128M000
	1200	25.4 × 35	1.94	B41252B9128M000
	1200	30 × 25	1.88	B41252C9128M000
	1500	22 × 45	2.18	B41252A9158M000
	1500	25.4 × 40	2.28	B41252B9158M000
	1500	30 × 30	2.23	B41252C9158M000
	1800	25.4 × 45	2.61	B41252A9188M000
	1800	30 × 35	2.57	B41252B9188M000

**Technical data and ordering codes B41252**

$V_R$	$C_R$ 120 Hz 20 °C	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
100	2200	25.4 × 50	2.85	B41252A9228M000
	2200	30 × 40	2.83	B41252B9228M000
	2200	35 × 30	2.76	B41252C9228M000
	2700	30 × 45	3.27	B41252A9278M000
	2700	35 × 35	3.22	B41252B9278M000
	3300	30 × 50	3.59	B41252A9338M000
	3300	35 × 40	3.55	B41252B9338M000
	3900	35 × 45	4.03	B41252A9398M000
	4700	35 × 50	4.40	B41252A9478M000

**Technical data and ordering codes B43252**

$V_R$	$C_R$ 120 Hz 20 °C	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
160	180	22 × 20	0.69	B43252A1187M000
	220	22 × 20	0.76	B43252A1227M000
	270	22 × 25	0.91	B43252A1277M000
	270	25.4 × 20	0.93	B43252B1277M000
	330	22 × 25	1.01	B43252A1337M000
	330	25.4 × 25	1.10	B43252B1337M000
	330	30 × 20	1.13	B43252C1337M000
	390	22 × 30	1.17	B43252A1397M000
	390	25.4 × 25	1.20	B43252B1397M000
	390	30 × 20	1.23	B43252D1397M000
	470	22 × 35	1.36	B43252A1477M000
	470	25.4 × 25	1.32	B43252B1477M000
	470	30 × 25	1.44	B43252C1477M000
	470	35 × 20	1.47	B43252D1477M000
	560	22 × 40	1.56	B43252A1567M000
	560	25.4 × 30	1.53	B43252B1567M000
	560	30 × 25	1.57	B43252C1567M000
	560	35 × 25	1.70	B43252D1567M000
	680	22 × 45	1.80	B43252A1687M000
	680	25.4 × 35	1.79	B43252B1687M000
	680	30 × 25	1.73	B43252C1687M000
	680	35 × 25	1.88	B43252D1687M000
	820	22 × 50	2.06	B43252A1827M000
	820	25.4 × 40	2.06	B43252B1827M000
	820	30 × 30	2.02	B43252C1827M000
	820	35 × 25	2.06	B43252D1827M000
	1000	25.4 × 45	2.38	B43252A1108M000
1000	30 × 35	2.35	B43252B1108M000	
1000	35 × 30	2.41	B43252C1108M000	
1200	25.4 × 50	2.52	B43252A1128M000	
1200	30 × 40	2.50	B43252B1128M000	
1200	35 × 30	2.44	B43252C1128M000	
1500	35 × 40	3.00	B43252A1158M000	
200	150	22 × 20	0.63	B43252A2157M000
	180	22 × 20	0.69	B43252A2187M000
	220	22 × 25	0.82	B43252A2227M000
	220	25.4 × 20	0.84	B43252B2227M000
	270	22 × 30	0.91	B43252A2277M000
	270	25.4 × 25	1.00	B43252B2277M000
	270	30 × 20	1.02	B43252C2277M000
	330	22 × 30	1.07	B43252A2337M000
	330	25.4 × 25	1.11	B43252D2337M000

**Technical data and ordering codes B43252**

$V_R$	$C_R$ 120 Hz 20 °C $\mu\text{F}$	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
200	330	30 × 20	1.13	B43252B2337M000
	390	22 × 35	1.24	B43252A2397M000
	390	25.4 × 30	1.28	B43252B2397M000
	390	30 × 25	1.31	B43252C2397M000
	390	35 × 20	1.34	B43252D2397M000
	470	22 × 40	1.43	B43252A2477M000
	470	25.4 × 35	1.40	B43252D2477M000
	470	30 × 25	1.44	B43252B2477M000
	470	35 × 25	1.56	B43252C2477M000
	560	22 × 45	1.63	B43252A2567M000
	560	25.4 × 40	1.62	B43252B2567M000
	560	30 × 30	1.67	B43252C2567M000
	560	35 × 25	1.70	B43252D2567M000
	680	22 × 50	1.88	B43252A2687M000
	680	25.4 × 45	1.96	B43252D2687M000
	680	30 × 30	1.84	B43252B2687M000
	680	35 × 25	1.88	B43252C2687M000
	820	25.4 × 50	2.25	B43252A2827M000
	820	30 × 35	2.13	B43252B2827M000
	820	35 × 30	2.18	B43252C2827M000
1000	30 × 45	2.57	B43252A2108M000	
1000	35 × 35	2.53	B43252B2108M000	
1200	30 × 50	2.72	B43252A2128M000	
1200	35 × 35	2.57	B43252B2128M000	
1500	35 × 45	3.13	B43252A2158M000	
250	150	22 × 25	0.68	B43252E2157M000
	150	25.4 × 20	0.69	B43252F2157M000
	180	22 × 25	0.74	B43252E2187M000
	180	25.4 × 20	0.76	B43252F2187M000
	180	30 × 20	0.83	B43252G2187M000
	220	22 × 30	0.88	B43252E2227M000
	220	25.4 × 25	0.90	B43252F2227M000
	220	30 × 20	0.92	B43252G2227M000
	270	22 × 35	1.03	B43252E2277M000
	270	25.4 × 30	1.06	B43252F2277M000
	270	30 × 25	1.09	B43252G2277M000
	270	35 × 20	1.11	B43252D2277M000
	330	22 × 40	1.20	B43252E2337M000
	330	25.4 × 30	1.18	B43252F2337M000
	330	30 × 25	1.21	B43252G2337M000
	330	35 × 20	1.23	B43252C2337M000
	390	22 × 45	1.36	B43252E2397M000



**Technical data and ordering codes B43252**

V <sub>R</sub>	C <sub>R</sub> 120 Hz 20 °C μF	Case dimensions d × l mm	I <sub>AC,R</sub> 120 Hz 105 °C A	Ordering code
250	390	25.4 × 40	1.42	B43252F2397M000
	390	30 × 30	1.39	B43252G2397M000
	390	35 × 25	1.42	B43252H2397M000
	470	22 × 50	1.56	B43252E2477M000
	470	25.4 × 40	1.56	B43252F2477M000
	470	30 × 30	1.53	B43252G2477M000
	470	35 × 25	1.56	B43252H2477M000
	560	25.4 × 50	1.86	B43252E2567M000
	560	30 × 35	1.76	B43252F2567M000
	560	35 × 30	1.80	B43252G2567M000
	680	30 × 45	2.12	B43252E2687M000
	680	35 × 35	2.09	B43252F2687M000
	820	35 × 40	2.40	B43252E2827M000
	1000	35 × 45	2.76	B43252E2108M000
	1200	35 × 50	2.91	B43252E2128M000
315	82	22 × 20	0.45	B43252A0826M000
	100	22 × 25	0.53	B43252A0107M000
	100	25.4 × 20	0.55	B43252B0107M000
	120	22 × 30	0.62	B43252A0127M000
	120	25.4 × 25	0.64	B43252B0127M000
	120	30 × 20	0.65	B43252C0127M000
	150	22 × 35	0.74	B43252A0157M000
	150	25.4 × 30	0.76	B43252B0157M000
	150	30 × 20	0.73	B43252C0157M000
	180	22 × 40	0.85	B43252A0187M000
	180	25.4 × 35	0.88	B43252B0187M000
	180	30 × 25	0.86	B43252C0187M000
	180	35 × 20	0.87	B43252D0187M000
	220	22 × 45	0.98	B43252A0227M000
	220	25.4 × 35	0.98	B43252B0227M000
	220	30 × 30	1.00	B43252C0227M000
	220	35 × 20	0.96	B43252D0227M000
	270	25.4 × 45	1.19	B43252A0277M000
	270	30 × 35	1.17	B43252B0277M000
	270	35 × 25	1.14	B43252C0277M000
	330	25.4 × 50	1.37	B43252A0337M000
	330	30 × 40	1.36	B43252B0337M000
	330	35 × 30	1.33	B43252C0337M000

**Technical data and ordering codes B43252**

V <sub>R</sub>	C <sub>R</sub> 120 Hz 20 °C μF	Case dimensions d × l mm	I <sub>AC,R</sub> 120 Hz 105 °C A	Ordering code
315	390	30 × 45	1.54	B43252A0397M000
	390	35 × 35	1.52	B43252B0397M000
	470	30 × 50	1.76	B43252A0477M000
	470	35 × 40	1.74	B43252B0477M000
	560	35 × 40	1.90	B43252A0567M000
	680	35 × 50	2.27	B43252A0687M000
350	68	22 × 20	0.41	B43252A4686M000
	82	22 × 25	0.48	B43252A4826M000
	82	25.4 × 20	0.49	B43252B4826M000
	100	22 × 25	0.53	B43252A4107M000
	100	25.4 × 25	0.59	B43252B4107M000
	100	30 × 20	0.60	B43252C4107M000
	120	22 × 30	0.62	B43252A4127M000
	120	25.4 × 25	0.64	B43252B4127M000
	120	30 × 20	0.65	B43252C4127M000
	150	22 × 40	0.78	B43252A4157M000
	150	25.4 × 30	0.76	B43252B4157M000
	150	30 × 25	0.78	B43252C4157M000
	150	35 × 20	0.80	B43252D4157M000
	180	22 × 45	0.89	B43252A4187M000
	180	25.4 × 35	0.88	B43252B4187M000
	180	30 × 30	0.91	B43252C4187M000
	180	35 × 20	0.87	B43252D4187M000
	220	22 × 50	1.03	B43252A4227M000
	220	25.4 × 40	1.03	B43252B4227M000
	220	30 × 30	1.00	B43252C4227M000
	220	35 × 25	1.03	B43252D4227M000
	270	25.4 × 45	1.19	B43252A4277M000
	270	30 × 35	1.17	B43252B4277M000
	270	35 × 30	1.20	B43252C4277M000
	330	30 × 40	1.36	B43252A4337M000
	330	35 × 35	1.40	B43252B4337M000
	390	30 × 45	1.54	B43252A4397M000
	390	35 × 40	1.59	B43252B4397M000
	470	35 × 45	1.82	B43252A4477M000
	560	35 × 50	2.06	B43252A4567M000

**Technical data and ordering codes B43252**

$V_R$	$C_R$	Case dimensions	$I_{AC,R}$	Ordering code
	120 Hz	$d \times l$	120 Hz	
V DC	20 °C	mm	105 °C	
	$\mu F$		A	
400	56	22 × 20	0.37	B43252A9566M000
	68	22 × 25	0.44	B43252A9686M000
	68	25.4 × 20	0.45	B43252B9686M000
	82	22 × 30	0.51	B43252A9826M000
	82	25.4 × 25	0.53	B43252B9826M000
	82	30 × 20	0.54	B43252C9826M000
	100	22 × 35	0.60	B43252A9107M000
	100	25.4 × 30	0.62	B43252C9107M000
	100	30 × 20	0.60	B43252B9107M000
	120	22 × 40	0.69	B43252A9127M000
	120	25.4 × 30	0.68	B43252B9127M000
	120	30 × 25	0.70	B43252C9127M000
	120	35 × 20	0.71	B43252D9127M000
	150	22 × 45	0.81	B43252A9157M000
	150	25.4 × 35	0.81	B43252B9157M000
	150	30 × 30	0.83	B43252C9157M000
	150	35 × 20	0.80	B43252D9157M000
	180	22 × 50	0.93	B43252A9187M000
	180	25.4 × 40	0.93	B43252B9187M000
	180	30 × 30	0.91	B43252C9187M000
	180	35 × 25	0.93	B43252D9187M000
	220	25.4 × 45	1.07	B43252C9227M000
	220	30 × 35	1.06	B43252A9227M000
	220	35 × 30	1.08	B43252B9227M000
	270	25.4 × 50	1.24	B43252A9277M000
	270	30 × 40	1.23	B43252B9277M000
	270	35 × 30	1.20	B43252C9277M000
	330	30 × 45	1.42	B43252A9337M000
330	35 × 35	1.40	B43252B9337M000	
390	30 × 50	1.61	B43252A9397M000	
390	35 × 40	1.59	B43252B9397M000	
470	35 × 45	1.82	B43252A9477M000	
560	35 × 50	2.06	B43252A9567M000	
450	47	22 × 20	0.34	B43252A5476M000
	56	22 × 25	0.40	B43252A5566M000
	56	25.4 × 20	0.41	B43252B5566M000
	68	22 × 30	0.47	B43252A5686M000
	68	25.4 × 25	0.48	B43252B5686M000
	68	30 × 20	0.49	B43252C5686M000
	82	22 × 35	0.54	B43252A5826M000
	82	25.4 × 30	0.54	B43252B5826M000
	82	30 × 20	0.54	B43252C5826M000

**Technical data and ordering codes B43252**

$V_R$	$C_R$ 120 Hz 20 °C	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
450	100	22 × 40	0.63	B43252A5107M000
	100	25.4 × 30	0.62	B43252B5107M000
	100	30 × 25	0.64	B43252C5107M000
	100	35 × 20	0.65	B43252D5107M000
	120	22 × 45	0.73	B43252A5127M000
	120	25.4 × 35	0.72	B43252B5127M000
	120	30 × 30	0.74	B43252C5127M000
	120	35 × 25	0.76	B43252D5127M000
	150	22 × 50	0.85	B43252A5157M000
	150	25.4 × 40	0.85	B43252B5157M000
	150	30 × 30	0.83	B43252C5157M000
	150	35 × 25	0.85	B43252D5157M000
	180	25.4 × 45	0.97	B43252A5187M000
	180	30 × 35	0.96	B43252B5187M000
	180	35 × 30	0.98	B43252C5187M000
	220	25.4 × 50	1.12	B43252A5227M000
	220	30 × 40	1.11	B43252B5227M000
	220	35 × 30	1.08	B43252C5227M000
	270	30 × 45	1.28	B43252A5277M000
	270	35 × 35	1.26	B43252B5277M000
330	30 × 50	1.48	B43252A5337M000	
330	35 × 40	1.46	B43252B5337M000	
390	35 × 45	1.66	B43252A5397M000	
470	35 × 50	1.89	B43252A5477M000	
500	47	22 × 25	0.25	B43252A6476M000
	47	25.4 × 20	0.30	B43252B6476M000
	56	22 × 30	0.29	B43252A6566M000
	56	25.4 × 30	0.30	B43252B6566M000
	56	30 × 20	0.36	B43252C6566M000
	68	22 × 40	0.34	B43252A6686M000
	68	25.4 × 35	0.35	B43252B6686M000
	68	30 × 25	0.36	B43252C6686M000
	68	35 × 20	0.48	B43252D6686M000
	82	22 × 45	0.40	B43252A6826M000
	82	25.4 × 40	0.41	B43252B6826M000
	82	30 × 30	0.48	B43252C6826M000
	82	35 × 25	0.48	B43252D6826M000
	100	22 × 50	0.47	B43252A6107M000
	100	25.4 × 45	0.46	B43252B6107M000
	100	30 × 35	0.47	B43252C6107M000
	100	35 × 30	0.48	B43252D6107M000
	120	25.4 × 50	0.53	B43252A6127M000

**Technical data and ordering codes B43252**

$V_R$	$C_R$ 120 Hz 20 °C	Case dimensions $d \times l$ mm	$I_{AC,R}$ 120 Hz 105 °C A	Ordering code
500	120	30 × 40	0.55	B43252B6127M000
	120	35 × 30	0.56	B43252C6127M000
	150	30 × 45	0.61	B43252A6157M000
	150	35 × 35	0.62	B43252B6157M000
	180	30 × 50	0.70	B43252A6187M000
	180	35 × 40	0.78	B43252B6187M000
	220	35 × 45	0.80	B43252A6227M000
	270	35 × 50	0.93	B43252A6277M000

## Cautions and warnings

### General

Also see "Important notes" on page 24.

- 1 Aluminum electrolytic capacitors have a bi-polar structure. This is marked on the body of the capacitor. A capacitor must not be mounted with reversed polarity. The application of an AC or reverse voltage may cause a short circuit or damage the capacitor. Bi-polar capacitors must not be used in AC applications, where the polarity may be reversed in the circuits or is unknown.
- 2 The DC voltage applied to the capacitor terminal must not exceed its rated operating voltage, as this will result in a rapid increase of the leakage current and may damage the capacitor. It is recommended to operate the capacitor at 70–80% of its rated voltage to optimize its service life.
- 3 The ripple current applied to the capacitor must be within the permitted range. An excessive ripple current leads to impaired electrical properties and may damage the capacitor. Note that the sum of the peak values of the ripple voltage and the DC operating voltage must not exceed the rated DC voltage.
- 4 Capacitors must be used within their permitted range of operating temperature. Operation at room temperature optimizes their service life.
- 5 Capacitors with case diameter  $\geq 8$  mm are equipped with a safety vent. In capacitors fitted with a lead or soldering lug, the safety vent is usually located at the base of the case. It needs sufficient space around it to operate optimally. The following dimensions are recommended: for case diameter  $d = 8$  to 16 mm, more than 2 mm; for  $d = 18$  to 35 mm, more than 3 mm; and for  $d = 42$  mm or more, more than 5 mm.
- 6 Capacitors should not be mounted with the safety vent face down on the board. Do not locate any wire or copper trace near the safety vent. Do not reverse the voltage, as this may result in excess pressure and the leakage of electrolyte.
- 7 Gas is released through the safety vent when the pressure inside the capacitor is too high. A gaseous liquid around the safety vent does not indicate a leakage of electrolyte.
- 8 The capacitor should be stored under conditions of normal temperature and in a non-acid, non-alkali environment of normal humidity. Exposure to high temperatures, for example under direct sunlight, will reduce its operating life. If the capacitor is stored in an environment containing acids or alkalis, the solderability of the leads may be affected.
- 9 The leakage current of an aluminum electrolytic capacitor may increase after a long period of storage. After such storage, the capacitor must be aged by applying the rated operating voltage for 6–8 hours before use.
- 10 Manual soldering:
  - a Soldering must be performed within the specified conditions.  
Bit temperature: 350 °C; application time of soldering iron: 3 seconds.
  - b Ensure that the soldering iron does not touch any part of the capacitor body.

## Cautions and warnings

- 11 Do not apply excessive force to the leads and terminals. Do not move the capacitor after soldering it onto the PC board and do not carry the PC board by gripping the capacitor. Observe the following rules to prevent undue stress to the capacitor:
  - a Do not tilt or bend the capacitor after soldering.
  - b Ensure that the terminal spacing matches the corresponding hole spacing on the PC board.
- 12 The aluminum case is not insulated from the cathode. Do not place a conductor under the aluminum capacitors on the PC board as this may cause a short circuit. The case and top of capacitors used in switched mode power supplies have a high-voltage-resistant heat shrink sleeve to ensure safe usage.
- 13 The leads of capacitors with a case diameter exceeding 14 mm cannot be used for fixing.

## 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.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet ([www.epcos.com/material](http://www.epcos.com/material)). Should you have any more detailed questions, please contact our sales offices.
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