Aluminum electrolytic capacitors

Large-size capacitors

Series/Type: **B43655**

Date: May 2025

Long-life grade capacitors

Applications

- On-board chargers

Features

- Extremely high CV product, ultra compact
- High reliability
- Ultra-high ripple current capability
- Design optimized for base cooling and high ripple current density
- Available with tight length tolerance (±0.5 mm) only for construction with pressure relief device on the case wall
- RoHS-compatible
- Qualification based on the AEC-Q200 rev. E standard

Construction

- Aluminum case, covered with PET sleeve without bottom disc
- Polyolefin sleeve available upon request
- Bottom disc available upon request
- Snap-in solder pins
- Minus pole marking on the PET sleeve
- Overload protection by pressure relief device on the base or on the case wall

Terminals

- Standard version with 2 terminals, 2 lengths available: 6.3 and 4.5 mm
- Version with 3 terminals, protection against polarity reversal: length 4.5 mm
- Vibration-resistant version with 2 terminals for diameter ≥30 mm: length 4.5 mm

Specifications and characteristics in brief

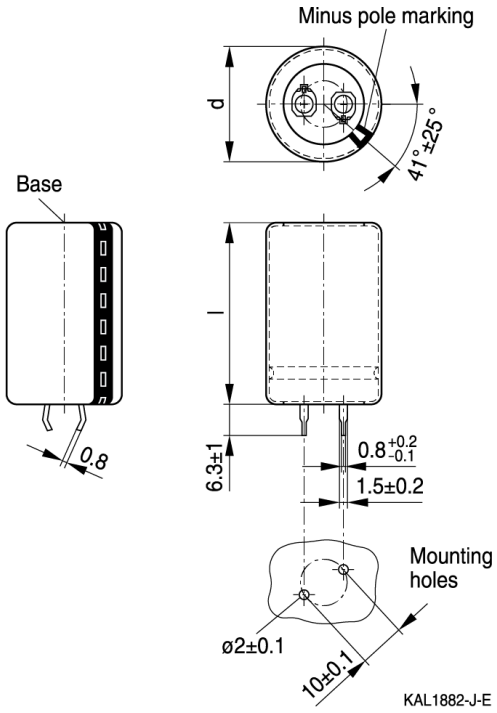
Rated voltage V_R Surge voltage V_S	475 ... 500 V DC 1.10 • V_R	
Rated capacitance C_R Capacitance tolerance	90 ... 940 µF ±20% ≙ M	
Dissipation factor tan δ (20 °C, 120 Hz)	≤ 0.2	
Leakage current I_{leak} (5 min, 20 °C)	$I_{leak} \leq 0.3\ \mu A \cdot \left(\frac{C_R}{\mu F} \cdot \frac{V_R}{V}\right)^{0.7} + 4\ \mu A$	
Self-inductance	Approx. 20 nH	
Useful life[1)] 105 °C; V_R; $I_{AC,R}$	> 3000 h	Requirements: |ΔC/C| ≤ 20% of initial value tan δ ≤ 2 times initial specified limit I_{leak} ≤ initial specified limit
Voltage endurance test 105 °C; V_R	2000 h	Requirements: |ΔC/C| ≤ 10% of initial value tan δ ≤ 1.3 times initial specified limit I_{leak} ≤ initial specified limit
Vibration resistance test	To IEC 60068-2-6:2007, test Fc: Frequency range 10 Hz ... 2 kHz, displacement amplitude max. 0.375 mm, acceleration max. 5 *g*, duration 3 × 4 h. Capacitor mounted by its body which is rigidly clamped to the work surface.	
Characteristics at low temperature test	Max. impedance ratio at 100 Hz	V_R ≥ 475 V $Z_{-25\ °C} / Z_{20\ °C}$ 5 $Z_{-40\ °C} / Z_{20\ °C}$ 11
IEC climatic category	To IEC 60068-1: 25/105/56 (–25 °C/+105 °C/56 days damp heat test) The capacitors can be operated in the temperature range of –40 °C to +105 °C but the impedance at –40 °C must be taken into consideration.	
Sectional specification	IEC 60384-4:2016	
Reference standard	AEC-Q200 rev E[2)]	

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

2) Refer to chapter “General technical information, 2.3 AEC-Q200 standard” for further details.

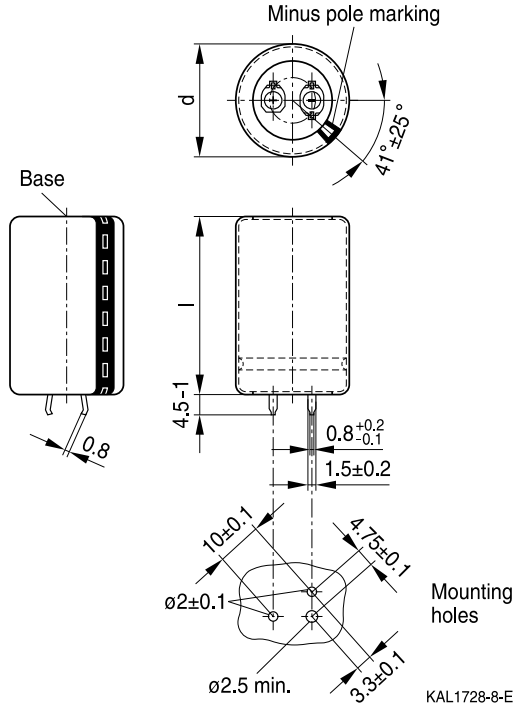
Dimensional drawings

Large-size capacitor, snap-in version with PET sleeve with base vent and standard length tolerance



Large-size capacitors, snap-in terminals, length (6.3 ±1) mm. Also available in a shorter version with a length of (4.5 –1) mm.

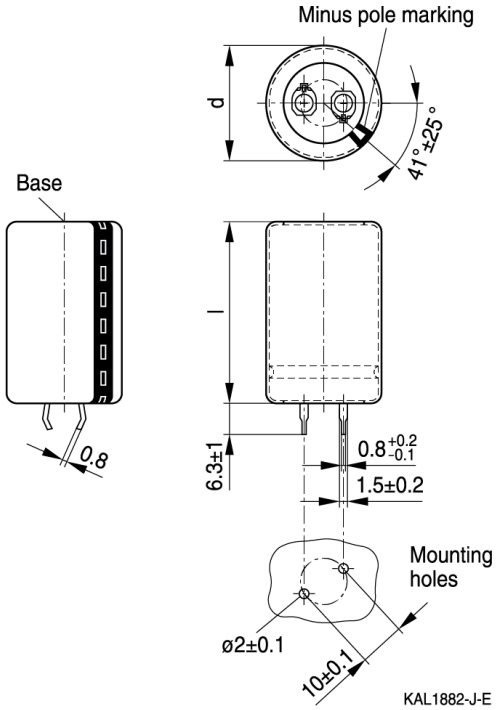
Dimensions (mm)		Approx.	Packing units
d +1	l ±2	weight (g)	(pcs.)
22	30	12	160
22	35	15	160
22	40	18	160
22	45	20	160
22	50	24	160
25	25	13	130
25	30	17	130
25	35	19	130
25	40	22	130
25	45	25	130
25	50	29	130
25	55	32	130
25	60	36	130



Large-size capacitors, snap-in version with 3 terminals, length (4.5 –1) mm.

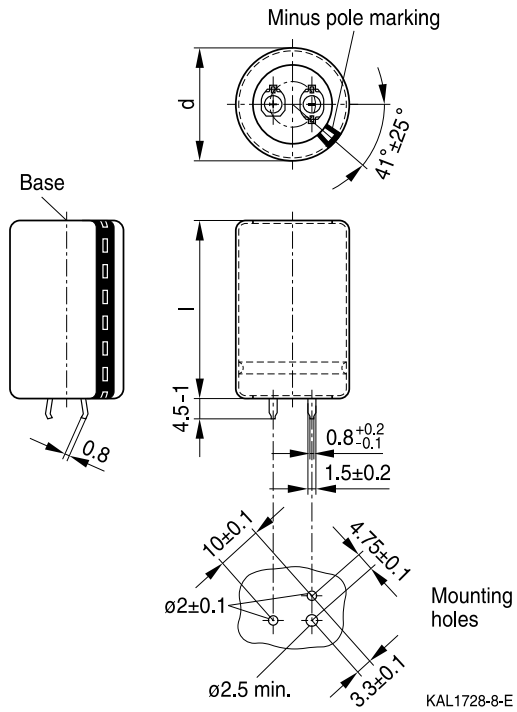
Dimensions (mm)		Approx.	Packing units
d +1	l ±2	weight (g)	(pcs.)
30	25	17	80
30	30	23	80
30	35	29	80
30	40	36	80
30	45	41	80
30	50	46	80
30	55	53	80
30	60	58	80
Dimensions (mm)		Approx.	Packing units
d +1	l +2.5/–2.0	weight (g)	(pcs.)
35	25	22	60
35	30	29	60
35	35	36	60
35	40	41	60
35	45	56	60
35	50	70	60
35	55	81	60
35	60	90	36

Large-size capacitor, snap-in version with PET sleeve with side vent and standard length tolerance



Large-size capacitors, snap-in terminals, length (6.3 ±1) mm. Also available in a shorter version with a length of (4.5 –1) mm.

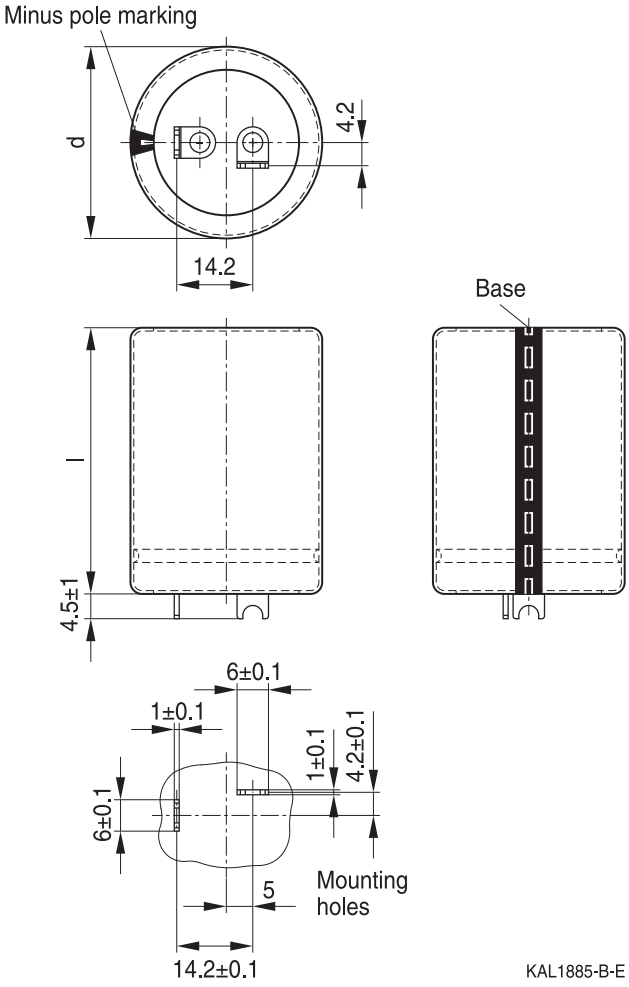
Dimensions (mm)		Approx.	Packing units
d +1	l +2	weight (g)	(pcs.)
22	30	12	160
22	35	15	160
22	40	18	160
22	45	20	160
22	50	24	160
25	25	13	130
25	30	17	130
25	35	19	130
25	40	22	130
25	45	25	130
25	50	29	130
25	55	32	130
25	60	36	130



Large-size capacitors, snap-in version with 3 terminals, length (4.5 –1) mm.

Dimensions (mm)		Approx.	Packing units
d +1	l +2	weight (g)	(pcs.)
30	25	17	80
30	30	23	80
30	35	29	80
30	40	36	80
30	45	41	80
30	50	46	80
30	55	53	80
35	25	22	60
35	30	29	60
35	35	36	60
35	40	41	60
35	45	56	60
35	50	70	60
35	55	81	60
35	60	90	36

Large-size capacitor, vibration-resistant terminal version with PET with sleeve side vent or base vent and standard length tolerance



Large-size capacitors, vibration-resistant terminals, length (4.5 ±1) mm.
Pressure relief device on the base or on case wall.

For pressure relief vent on the case wall.

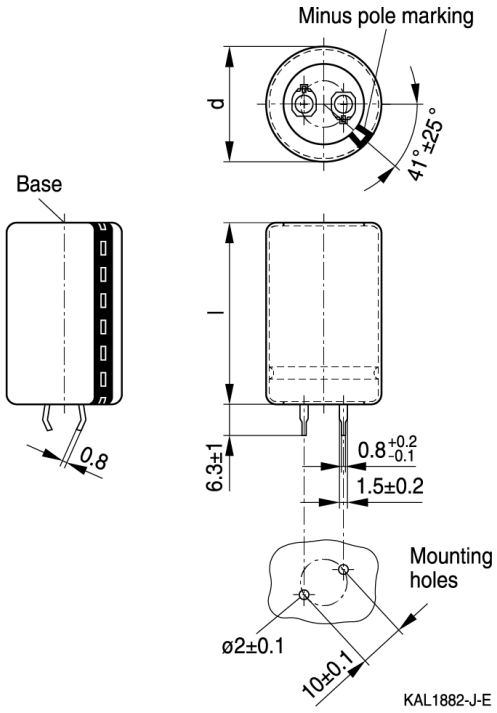
Dimensions (mm)		Approx.	Packing units
d +1	l +2	weight (g)	(pcs.)
30	25	17	80
30	30	23	80
30	35	29	80
30	40	36	80
30	45	41	80
30	50	46	80
30	55	53	80
35	25	22	60
35	30	29	60
35	35	36	60
35	40	41	60
35	45	56	60
35	50	70	60
35	55	81	60
35	60	90	36

For pressure relief vent on the base.

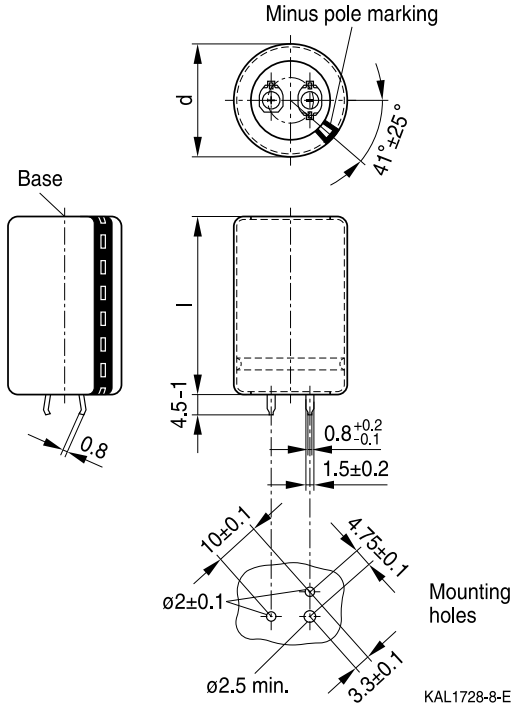
Dimensions (mm)		Approx.	Packing units
d +1	l ±2	weight (g)	(pcs.)
30	25	17	80
30	30	23	80
30	35	29	80
30	40	36	80
30	45	41	80
30	50	46	80
30	55	53	80
30	60	58	60

Dimensions (mm)		Approx.	Packing units
d +1	l +2.5/–2.0	weight (g)	(pcs.)
35	25	22	60
35	30	29	60
35	35	36	60
35	40	41	60
35	45	56	60
35	50	70	60
35	55	81	60
35	60	90	36

Large-size capacitor, snap-in version with PET sleeve with side vent and tight length tolerance (±0.5 mm)



Large-size capacitors, snap-in terminals, length (6.3 ±1) mm. Also available in a shorter version with a length of (4.5 –1) mm.

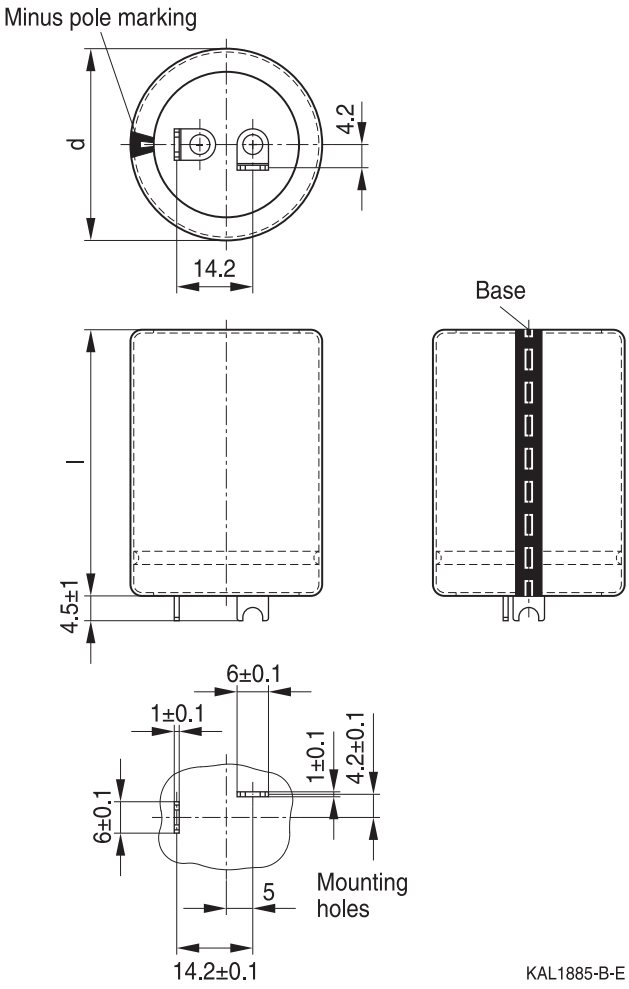


Large-size capacitors, snap-in version with 3 terminals, length (4.5 –1) mm.

Dimensions (mm)		Approx.	Packing units
d +1	l ±0.5	weight (g)	(pcs.)
22	30.4	12	160
22	35.4	15	160
22	40.4	18	160
22	45.4	20	160
22	50.4	24	160
25	25.5	13	130
25	30.5	17	130
25	35.5	19	130
25	40.5	22	130
25	45.5	25	130
25	50.5	29	130
25	55.5	32	130

Dimensions (mm)		Approx.	Packing units
d +1	l ±0.5	weight (g)	(pcs.)
30	25.5	17	80
30	30.5	23	80
30	35.5	29	80
30	40.5	36	80
30	45.5	41	80
30	50.5	46	80
30	55.5	53	80
35	25.9	22	60
35	30.9	29	60
35	35.9	36	60
35	40.9	41	60
35	45.9	56	60
35	50.9	70	60
35	55.9	81	60
35	60.9	90	36

Large-size capacitor, vibration-resistant terminal version with PET sleeve with side vent and tight length tolerance (±0.5 mm)



Dimensions (mm)		Approx.	Packing units
d +1	l ±0.5	weight (g)	(pcs.)
30	25.5	17	80
30	30.5	23	80
30	35.5	29	80
30	40.5	36	80
30	45.5	41	80
30	50.5	46	80
30	55.5	53	80
35	25.9	22	60
35	30.9	29	60
35	35.9	36	60
35	40.9	41	60
35	45.9	56	60
35	50.9	70	60
35	55.9	81	60
35	60.9	90	36

Packing example of large-size capacitors

For ecological reasons the packing is cardboard. Blister packaging is available upon request.

Ordering codes for terminal styles

Identification in 3rd block of ordering code

Large-size capacitors		
Terminal version	Standard length tolerance (Base and side vent)	Tight length tolerance (Only side vent)
3 terminals 4.5 mm	M052	M152
2 terminals 4.5 mm	M057	M157
2 terminals 6.3 mm	M050	M150
2 vibration-resistant terminals 4.5 mm	M058	M158

Ordering codes for pressure relief vent position

Identification in 7th digit of ordering code

Large-size capacitors	
Pressure relief vent position	
On the case wall	A, B, C
On the base	E, F, G

Ordering examples:

B43655A6417M052 }	large-size capacitor, pressure relief vent on the case wall, snap-in version with 3 terminals 4.5 mm and +2 mm length tolerance
B43655A6417M157 }	large-size capacitor, pressure relief vent on the case wall, snap-in version with 2 terminals 4.5 mm and ±0.5 mm length tolerance
B43655E6457M057 }	large-size capacitor, pressure relief vent on the base, snap-in version with 2 terminals 4.5 mm and ±2 mm length tolerance

Overview of available types

Other voltage and capacitance ratings are also available upon request.

V_R (V DC)	475		500	
	Case dimensions d × l (mm)			
C_R (µF)	Side vent	Base vent	Side vent	Base vent
90			22 × 30 25 × 25	
110	22 × 30 25 × 25			22 × 30 25 × 25
120			22 × 35	
130		22 × 30	25 × 30	22 × 35
140	22 × 35	25 × 25	22 × 40 30 × 25	
150	25 × 30			25 × 30
160		22 × 35	25 × 35	22 × 40
170	22 × 40 30 × 25		22 × 45	
180		25 × 30		22 × 45 25 × 35 30 × 25
190		22 × 40	22 × 50	
200	22 × 45 25 × 35		25 × 40 30 × 30	
210		30 × 25	35 × 25	22 × 50
220		22 × 45 25 × 35		25 × 40
230	22 × 50		25 × 45	30 × 30
240	25 × 40 30 × 30			
250	35 × 25	22 × 50	30 × 35	25 × 45 35 × 25
260		25 × 40		
270			25 × 50	
280	25 × 45	30 × 30	35 × 30	
290				25 × 50 30 × 35

Overview of available types

Other voltage and capacitance ratings are also available upon request.

V_R (V DC)	475		500	
	Case dimensions d × l (mm)			
C_R (µF)	Side vent	Base vent	Side vent	Base vent
300	30 × 35	35 × 25	25 × 55 30 × 40	
310		25 × 45		
320	25 × 50			25 × 55
330				35 × 30
340	35 × 30	30 × 35		30 × 40
350		25 × 50		
360	25 × 55 30 × 40		30 × 45 35 × 35	25 × 60
390		25 × 55		30 × 45
400		35 × 30		
410		30 × 40	30 × 50	35 × 35
420				
430	30 × 45 35 × 35	25 × 60	35 × 40	
450				30 × 50
460			30 × 55	
470		30 × 45		
480				35 × 40
490	30 × 50	35 × 35		
500				30 × 55
510			35 × 45	
520	35 × 40			
530		30 × 50		
550	30 × 55			30 × 60
560				35 × 45
580		35 × 40	35 × 50	
600		30 × 55		
610	35 × 45			
640				35 × 50
660		30 × 60	35 × 55	
670		35 × 45		

Overview of available types

Other voltage and capacitance ratings are also available upon request.

V_R (V DC)	475		500	
	Case dimensions d × l (mm)			
C_R (µF)	Side vent	Base vent	Side vent	Base vent
700	35 × 50			
710				35 × 55
740			35 × 60	
760		35 × 50		
790	35 × 55			35 × 60
850		35 × 55		
880	35 × 60			
940		35 × 60		

Technical data and ordering codes side vent

C_R 120 Hz 20 °C	Case dimensions d × l	ESR_{typ} 120 Hz 20 °C	Z_{max} 10 kHz 20 °C	$I_{AC,max}$ 120 Hz T_A 60 °C	$I_{AC,max}$ [1] 120 Hz T_A 85 °C T_{HS} 85 °C	$I_{AC,max}$ 120 Hz T_A 85 °C	$I_{AC,R}$ 120 Hz T_A 105 °C	Ordering code (composition see below)
µF	mm	mΩ	mΩ	A	A	A	A	
V_R = 475 V DC								
110	22 × 30	790	1210	2.05	2.01	1.54	0.77	B43655A0117M*5#
110	25 × 25	800	1230	2.02	2.01	1.52	0.76	B43655B0117M*5#
140	22 × 35	620	960	2.45	2.55	1.84	0.92	B43655A0147M*5#
150	25 × 30	590	900	2.51	2.74	1.88	0.94	B43655A0157M*5#
170	22 × 40	510	790	2.84	3.10	2.13	1.07	B43655A0177M*5#
170	30 × 25	510	790	2.83	3.10	2.12	1.06	B43655B0177M*5#
200	22 × 45	440	670	3.22	3.65	2.42	1.21	B43655A0207M*5#
200	25 × 35	440	680	3.07	3.65	2.31	1.16	B43655B0207M*5#
230	22 × 50	380	580	3.60	4.20	2.70	1.36	B43655A0237M*5#
240	25 × 40	370	570	3.53	4.38	2.65	1.33	B43655A0247M*5#
240	30 × 30	360	560	3.58	4.38	2.69	1.35	B43655B0247M*5#
250	35 × 25	350	550	3.68	4.56	2.76	1.38	B43655A0257M*5#
280	25 × 45	320	490	3.99	5.11	3.00	1.50	B43655A0287M*5#
300	30 × 35	290	450	4.21	5.48	3.16	1.59	B43655A0307M*5#
320	25 × 50	280	430	4.44	5.84	3.34	1.67	B43655A0327M*5#
340	35 × 30	260	400	4.54	6.21	3.41	1.61	B43655A0347M*5#
360	25 × 55	250	380	4.88	6.57	3.67	1.84	B43655A0367M*5#
360	30 × 40	240	380	4.83	6.57	3.63	1.72	B43655B0367M*5#
430	30 × 45	200	320	5.53	7.85	4.15	1.96	B43655A0437M*5#
430	35 × 35	210	320	5.37	7.85	4.03	1.91	B43655B0437M*5#
490	30 × 50	180	280	6.12	8.79	4.60	2.17	B43655A0497M*5#
520	35 × 40	170	270	6.17	9.50	4.63	2.19	B43655A0527M*5#
550	30 × 55	160	250	6.72	9.36	5.05	2.39	B43655A0557M*5#
610	35 × 45	150	230	6.96	10.46	5.22	2.47	B43655A0617M*5#
700	35 × 50	130	200	7.73	11.26	5.80	2.74	B43655A0707M*5#
790	35 × 55	110	180	8.49	12.04	6.38	3.02	B43655A0797M*5#
880	35 × 60	100	160	9.25	12.78	6.95	3.29	B43655A0887M*5#

1) Ripple current when mounted to a heat sink with fixed temperature T_{HS} and considering 1 K/W thermal resistance between the heat sink and the case (bottom).

Composition of ordering code

* = Length tolerance (see dimensional drawings)
  0 = +2 mm
  1 = ±0.5 mm

# = Terminal style
  0 = snap-in standard terminals (6.3 mm)
  2 = snap-in 3 terminals (4.5 mm)
  7 = snap-in short terminals (4.5 mm)
  8 = 2 vibration-resistant terminals (4.5 mm) - available in diameter 30 and 35 mm

Technical data and ordering codes base vent

C_R 120 Hz 20 °C	Case dimensions d × l	ESR_{typ} 120 Hz 20 °C	Z_{max} 10 kHz 20 °C	$I_{AC,max}$ 120 Hz T_A 60 °C	$I_{AC,max}$ 120 Hz T_A 85 °C	$I_{AC,R}$ 120 Hz T_A 105 °C	Ordering code (composition see below)
µF	mm	mΩ	mΩ	A	A	A	
V_R = 475 V DC							
130	22 × 30	670	1030	2.09	1.57	0.79	B43655E0137M05#
140	25 × 25	630	970	2.10	1.58	0.79	B43655E0147M05#
160	22 × 35	550	840	2.48	1.87	0.94	B43655E0167M05#
180	25 × 30	490	760	2.56	1.93	0.97	B43655E0187M05#
190	22 × 40	460	710	2.86	2.16	1.08	B43655E0197M05#
210	30 × 25	440	680	2.66	2.01	1.01	B43655E0217M05#
220	22 × 45	400	610	3.25	2.45	1.23	B43655E0227M05#
220	25 × 35	400	620	3.02	2.28	1.14	B43655F0227M05#
250	22 × 50	350	540	3.63	2.74	1.38	B43655E0257M05#
260	25 × 40	340	530	3.47	2.61	1.31	B43655E0267M05#
280	30 × 30	330	510	3.31	2.50	1.25	B43655E0287M05#
300	35 × 25	330	510	3.19	2.40	1.21	B43655E0307M05#
310	25 × 45	290	440	4.03	3.03	1.52	B43655E0317M05#
340	30 × 35	270	420	3.88	2.93	1.47	B43655E0347M05#
350	25 × 50	250	390	4.48	3.37	1.69	B43655E0357M05#
390	25 × 55	230	350	4.92	3.70	1.86	B43655E0397M05#
400	35 × 30	250	390	3.94	2.97	1.41	B43655E0407M05#
410	30 × 40	230	350	4.51	3.40	1.61	B43655E0417M05#
430	25 × 60	210	320	5.36	4.04	1.91	B43655E0437M05#
470	30 × 45	200	310	5.07	3.81	1.81	B43655E0477M05#
490	35 × 35	200	320	4.63	3.48	1.65	B43655E0497M05#
530	30 × 50	170	270	5.62	4.23	2.01	B43655E0537M05#
580	35 × 40	170	270	5.30	3.99	1.89	B43655E0587M05#
600	30 × 55	150	240	6.24	4.70	2.23	B43655E0607M05#
660	30 × 60	140	220	6.78	5.11	2.42	B43655E0667M05#
670	35 × 45	150	230	5.96	4.49	2.13	B43655E0677M05#
760	35 × 50	130	210	6.62	4.99	2.36	B43655E0767M05#
850	35 × 55	120	190	7.29	5.48	2.60	B43655E0857M05#
940	35 × 60	110	170	7.94	5.98	2.83	B43655E0947M05#

Composition of ordering code

# = Terminal style
0 = snap-in standard terminals (6.3 mm)
2 = snap-in 3 terminals (4.5 mm)
7 = snap-in short terminals (4.5 mm)
8 = 2 vibration-resistant terminals (4.5 mm) - available in diameter 30 and 35 mm

Technical data and ordering codes side vent

C_R 120 Hz 20 °C	Case dimensions d × l	ESR_{typ} 120 Hz 20 °C	Z_{max} 10 kHz 20 °C	$I_{AC,max}$ 120 Hz T_A 60 °C	$I_{AC,max}$ [1] 120 Hz T_A 85 °C T_{HS} 85 °C	$I_{AC,max}$ 120 Hz T_A 85 °C	$I_{AC,R}$ 120 Hz T_A 105 °C	Ordering code (composition see below)
µF	mm	mΩ	mΩ	A	A	A	A	
V_R = 500 V DC								
90	22 × 30	850	1260	1.88	1.64	1.41	0.71	B43655A6906M*5#
90	25 × 25	850	1280	1.87	1.64	1.40	0.70	B43655B6906M*5#
120	22 × 35	640	950	2.32	2.19	1.74	0.87	B43655A6127M*5#
130	25 × 30	590	890	2.40	2.37	1.80	0.90	B43655A6137M*5#
140	22 × 40	550	820	2.62	2.55	1.97	0.98	B43655A6147M*5#
140	30 × 25	540	820	2.62	2.55	1.96	0.98	B43655B6147M*5#
160	25 × 35	480	720	2.80	2.92	2.10	1.05	B43655A6167M*5#
170	22 × 45	450	670	3.04	3.10	2.28	1.14	B43655A6177M*5#
190	22 × 50	400	600	3.33	3.47	2.50	1.25	B43655A6197M*5#
200	25 × 40	390	580	3.30	3.65	2.48	1.24	B43655A6207M*5#
200	30 × 30	380	570	3.34	3.65	2.51	1.25	B43655B6207M*5#
210	35 × 25	370	550	3.46	3.83	2.60	1.30	B43655A6217M*5#
230	25 × 45	340	510	3.69	4.20	2.77	1.39	B43655A6237M*5#
250	30 × 35	310	460	3.92	4.56	2.94	1.48	B43655A6257M*5#
270	25 × 50	290	430	4.17	4.93	3.13	1.57	B43655A6277M*5#
280	35 × 30	280	420	4.22	5.11	3.17	1.50	B43655A6287M*5#
300	25 × 55	260	390	4.55	5.48	3.42	1.71	B43655A6307M*5#
300	30 × 40	260	380	4.50	5.48	3.38	1.60	B43655B6307M*5#
360	30 × 45	210	320	5.16	6.57	3.87	1.83	B43655A6367M*5#
360	35 × 35	220	330	5.04	6.57	3.78	1.79	B43655B6367M*5#
410	30 × 50	190	280	5.71	7.49	4.29	2.03	B43655A6417M*5#
430	35 × 40	180	270	5.74	7.85	4.31	2.04	B43655A6437M*5#
460	30 × 55	170	250	6.26	8.40	4.70	2.22	B43655A6467M*5#
510	35 × 45	150	230	6.52	9.32	4.89	2.31	B43655A6517M*5#
580	35 × 50	130	200	7.20	10.59	5.40	2.55	B43655A6587M*5#
660	35 × 55	120	180	7.95	11.16	5.97	2.82	B43655A6667M*5#
740	35 × 60	110	160	8.70	11.93	6.53	3.09	B43655A6747M*5#

1) Ripple current when mounted to a heat sink with fixed temperature T_{HS} and considering 1 K/W thermal resistance between the heat sink and the case (bottom).

Composition of ordering code

* = Length tolerance (see dimensional drawings)
  0 = +2 mm
  1 = ±0.5 mm

# = Terminal style
  0 = snap-in standard terminals (6.3 mm)
  2 = snap-in 3 terminals (4.5 mm)
  7 = snap-in short terminals (4.5 mm)
  8 = 2 vibration-resistant terminals (4.5 mm) - available in diameter 30 and 35 mm

Technical data and ordering codes base vent

C_R 120 Hz 20 °C	Case dimensions d × l	ESR_{typ} 120 Hz 20 °C	Z_{max} 10 kHz 20 °C	$I_{AC,max}$ 120 Hz T_A 60 °C	$I_{AC,max}$ 120 Hz T_A 85 °C	$I_{AC,R}$ 120 Hz T_A 105 °C	Ordering code (composition see below)
µF	mm	mΩ	mΩ	A	A	A	
V_R = 500 V DC							
110	22 × 30	690	1040	1.96	1.48	0.74	B43655E6117M05#
110	25 × 25	700	1050	1.87	1.41	0.71	B43655F6117M05#
130	22 × 35	590	880	2.26	1.70	0.85	B43655E6137M05#
150	25 × 30	520	770	2.39	1.80	0.90	B43655E6157M05#
160	22 × 40	480	720	2.69	2.02	1.02	B43655E6167M05#
180	22 × 45	420	640	2.97	2.24	1.13	B43655E6187M05#
180	25 × 35	430	640	2.77	2.09	1.05	B43655F6187M05#
180	30 × 25	440	670	2.56	1.93	0.97	B43655G6187M05#
210	22 × 50	360	550	3.39	2.56	1.28	B43655E6217M05#
220	25 × 40	350	530	3.28	2.47	1.24	B43655E6227M05#
230	30 × 30	350	530	3.09	2.33	1.17	B43655E6237M05#
250	25 × 45	310	470	3.65	2.75	1.38	B43655E6257M05#
250	35 × 25	340	520	3.04	2.29	1.15	B43655F6257M05#
290	25 × 50	270	400	4.15	3.13	1.57	B43655E6297M05#
290	30 × 35	280	420	3.72	2.80	1.41	B43655F6297M05#
320	25 × 55	240	370	4.52	3.41	1.71	B43655E6327M05#
330	35 × 30	260	390	3.74	2.82	1.34	B43655E6337M05#
340	30 × 40	240	360	4.24	3.19	1.51	B43655E6347M05#
360	25 × 60	220	330	5.02	3.78	1.79	B43655E6367M05#
390	30 × 45	210	310	4.75	3.58	1.70	B43655E6397M05#
410	35 × 35	210	320	4.42	3.33	1.58	B43655E6417M05#
450	30 × 50	180	270	5.36	4.03	1.91	B43655E6457M05#
480	35 × 40	180	270	5.03	3.79	1.80	B43655E6487M05#
500	30 × 55	160	250	5.87	4.42	2.09	B43655E6507M05#
550	30 × 60	150	220	6.38	4.80	2.28	B43655E6557M05#
560	35 × 45	150	240	5.70	4.29	2.03	B43655E6567M05#
640	35 × 50	130	210	6.36	4.79	2.27	B43655E6647M05#
710	35 × 55	120	190	6.96	5.24	2.48	B43655E6717M05#
790	35 × 60	110	170	7.61	5.73	2.72	B43655E6797M05#

Composition of ordering code

# = Terminal style
0 = snap-in standard terminals (6.3 mm)
2 = snap-in 3 terminals (4.5 mm)
7 = snap-in short terminals (4.5 mm)
8 = 2 vibration-resistant terminals (4.5 mm) - available in diameter 30 and 35 mm

Useful life

For useful life calculations, please use our web-based "AlCap Useful Life Calculation Tool", which can be found on the Internet under the following link:
www.tdk-electronics.tdk.com/en/alcap
The AlCap Useful Life Calculation Tool provides calculations of useful life as well as additional data for selected capacitor types under operating conditions defined by the user.

Cautions and warnings

Personal safety

The electrolytes used 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 are self-extinguishing.

As far as possible, we do 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 our aluminum electrolytic capacitors are continuously adapted in compliance with the TDK Electronics 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 our website for all types listed in the data book.
MDS for customer specific capacitors are available 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.

Product safety

The table below summarizes the safety instructions that must be observed without fail. A detailed description can be found in the relevant sections of seperate file chapter "General technical information"

Topic	Safety information	Reference chapter "General technical information"
Polarity	Make sure that polar capacitors are connected with the right polarity.	1 "Basic construction of aluminum electrolytic capacitors"
Reverse voltage	Voltages of opposite polarity should be prevented by connecting a diode.	3.1.6 "Reverse voltage"
Mounting position of capacitors with screw or multi-pin terminals	Multi-pin capacitors with pressure relief vent on the can base must not be mounted with terminals facing up unless otherwise specified.	11.1 "Mounting positions of capacitors with screw or multi-pin terminals"
Robustness of terminals	The following maximum tightening torques must not be exceeded when connecting screw terminals: M5: 2.5 Nm M6: 4.0 Nm	11.2 "Mounting torques"
Mounting of single-ended capacitors	The internal structure of single-ended capacitors might be damaged if excessive force is applied to the lead wires. Avoid any compressive, tensile or flexural stress. Do not move the capacitor after soldering to PC board. Do not pick up the PC board by the soldered capacitor. Do not insert the capacitor on the PC board with a hole space different to the lead space specified.	11.3 "Mounting considerations for single-ended capacitors"
Soldering	Do not exceed the specified time or temperature limits during soldering.	11.5 "Soldering"
Soldering, cleaning agents	Do not allow halogenated hydrocarbons to come into contact with aluminum electrolytic capacitors.	11.6 "Cleaning agents"
Upper category temperature	Do not exceed the upper category temperature.	7.2 "Maximum permissible operating temperature"
Passive flammability	Avoid external energy, e.g. fire.	8.1 "Passive flammability"
Active flammability	Avoid overload of the capacitors.	8.2 "Active flammability"

Topic	Safety information	Reference chapter "General technical information"
Maintenance	Make periodic inspections of the capacitors. Before the inspection, make sure that the power supply is turned off and carefully discharge the capacitors. Do not apply excessive mechanical stress to the capacitor terminals when mounting.	10 "Maintenance"
Storage	Do not store capacitors at high temperatures or high humidity. Capacitors should be stored at +5 to +35 °C and a relative humidity of ≤ 75%.	7.3 "Shelf life and storage conditions"
		Reference chapter "Capacitors with screw terminals"
Breakdown strength of insulating sleeves	Do not damage the insulating sleeve, especially when ring clips are used for mounting.	"Screw terminals – accessories"

Display of ordering codes for TDK Electronics products

The ordering code for one and the same product can be represented differently in data sheets, data books, other publications, on the company website, or in order-related documents such as shipping notes, order confirmations and product labels. The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products.
Detailed information can be found on the Internet under www.tdk-electronics.tdk.com/orderingcodes.

Symbols and terms

Symbol	English	German
C	Capacitance	Kapazität
C_R	Rated capacitance	Nennkapazität
C_S	Series capacitance	Serienkapazität
$C_{S,T}$	Series capacitance at temperature T	Serienkapazität bei Temperatur T
C_f	Capacitance at frequency f	Kapazität bei Frequenz f
d	Case diameter, nominal dimension	Gehäusedurchmesser, Nennmaß
d_{max}	Maximum case diameter	Maximaler Gehäusedurchmesser
ESL	Self-inductance	Eigeninduktivität
ESR	Equivalent series resistance	Ersatzserienwiderstand
ESR_f	Equivalent series resistance at frequency f	Ersatzserienwiderstand bei Frequenz f
ESR_T	Equivalent series resistance at temperature T	Ersatzserienwiderstand bei Temperatur T
f	Frequency	Frequenz
I	Current	Strom
I_{AC}	Alternating current (ripple current)	Wechselstrom
$I_{AC,RMS}$	Root-mean-square value of alternating current	Wechselstrom, Effektivwert
$I_{AC,f}$	Ripple current at frequency f	Wechselstrom bei Frequenz f
$I_{AC,max}$	Maximum permissible ripple current	Maximal zulässiger Wechselstrom
$I_{AC,R}$	Rated ripple current	Nennwechselstrom
I_{leak}	Leakage current	Reststrom
$I_{leak,op}$	Operating leakage current	Betriebsreststrom
l	Case length, nominal dimension	Gehäuselänge, Nennmaß
l_{max}	Maximum case length (without terminals and mounting stud)	Maximale Gehäuselänge (ohne Anschlüsse und Gewindebolzen)
R	Resistance	Widerstand
R_{ins}	Insulation resistance	Isolationswiderstand
R_{symm}	Balancing resistance	Symmetrierwiderstand
T	Temperature	Temperatur
ΔT	Temperature difference	Temperaturdifferenz
T_A	Ambient temperature	Umgebungstemperatur
T_B	Capacitor base temperature	Temperatur des Gehäusebodens
T_C	Case temperature	Gehäusetemperatur
t	Time	Zeit
Δt	Period	Zeitraum
t_b	Service life (operating hours)	Brauchbarkeitsdauer (Betriebszeit)
V	Voltage	Spannung
V_F	Forming voltage	Formierspannung
V_{op}	Operating voltage	Betriebsspannung
V_R	Rated voltage, DC voltage	Nennspannung, Gleichspannung
V_S	Surge voltage	Spitzenspannung
X_C	Capacitive reactance	Kapazitiver Blindwiderstand

Symbol	English	German
X_L	Inductive reactance	Induktiver Blindwiderstand
Z	Impedance	Scheinwiderstand
Z_T	Impedance at temperature T	Scheinwiderstand bei Temperatur T
tan δ	Dissipation factor	Verlustfaktor
λ	Failure rate	Ausfallrate
ε_0	Absolute permittivity	Elektrische Feldkonstante
ε_r	Relative permittivity	Dielektrizitätszahl
ω	Angular frequency; $2 \cdot \pi \cdot f$	Kreisfrequenz; $2 \cdot \pi \cdot f$

Note:
All dimensions are given in mm.

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 we are 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 a 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.tdk-electronics.tdk.com/material). Should you have any more detailed questions, please contact our sales offices.

5 We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.
We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6 Unless otherwise agreed in individual contracts, **all orders are subject to our General Terms and Conditions of Supply**.

7 **Our manufacturing sites serving the automotive business apply the IATF 16949 standard**. The IATF certifications confirm our compliance with requirements regarding the quality management system in the automotive industry. Referring to customer requirements and customer specific requirements (“CSR”) TDK always has and will continue to have the policy of respecting individual agreements. Even if IATF 16949 may appear to support the acceptance of unilateral requirements, we hereby like to emphasize that **only requirements mutually agreed upon can and will be implemented in our Quality Management System**. For clarification purposes we like to point out that obligations from IATF 16949 shall only become legally binding if individually agreed upon.

8 The trade names EPCOS, CarXield, CeraCharge, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CTVS, DeltaCap, DigiSiMic, FilterCap, FormFit, InsuGate, LeaXield, MediPlas, MiniBlue, MiniCell, MKD, MKK, ModCap, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PiezoBrush, PlasmaBrush, PowerHap, PQSine, PQvar, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SurfIND, ThermoFuse, WindCap, XieldCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.tdk-electronics.tdk.com/trademarks.

Release 2024-02