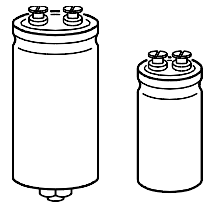


High-performance types, LL grade
Maximum reliability and long useful life

Construction

- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Poles with screw terminal connections
- Mounting with ring clips, clamps or threaded stud
- The bases of types with threaded stud and $d \leq 76,9$ mm are not insulated, types with $d = 91$ mm have fully insulated bases
- Self-extinguishing electrolyt



B 43 570 B 43 550

Features

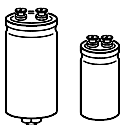
- Maximum reliability
- Good thermal characteristics and high ripple current characteristics
- Long useful life
- Wide temperature range
- All-welded construction ensures reliable electrical contact
- Type with optimized construction for base cooling upon request

Applications

- Highly professional power supplies
- Power electronics, e. g. capacitor banks in current converters

Specifications and characteristics in brief

Rated voltage U_R	160 to 450 V–
Surge voltage U_S	$1,15 \cdot U_R$ (for $U_R \leq 250$ V–) $1,10 \cdot U_R$ (for $U_R \geq 350$ V–)
Rated capacitance C_R	470 to 15 000 μ F
Capacitance tolerance	– 10/+ 30 % $\triangleq$ Q
Useful life	
40 °C, U_R	$> 200\,000$ h ($3 \cdot I_{R,105\,^{\circ}\text{C}}$)
85 °C, U_R , I_{max}	$> 15\,000$ h
105 °C, U_R , I_{-R}	$> 6\,000$ h
Failure percentage	≤ 1 % (during useful life)
Failure rate	≤ 20 fit ($\leq 20 \cdot 10^{-9}$ /h)
Voltage endurance test	2 000 h, 105 °C (at U_R , I_{-R})
Leakage current I_{lka} (5 min, 20 °C)	$I_{\text{lka}} \leq 0,3 \mu\text{A} \cdot \left(\frac{C_R}{\mu\text{F}} \cdot \frac{U_R}{\text{V}} \right)^{0,7} + 4 \mu\text{A}$



B 43 550
B 43 570

Optimized range

Specifications and characteristics in brief

Self-inductance L_{ESL}	$d = 51,6$ mm: approx. 15 nH $d \geq 64,3$ mm: approx. 20 nH
IEC climatic category	in accordance with IEC 68-1 ≤ 350 V–: 40/105/56 (–40 °C/+105 °C, 56 days damp heat test) ¹⁾ 400 V–: 25/105/56 (–25 °C/+105 °C, 56 days damp heat test)
Detail specifications	similar to CECC 30 301-803, CECC 30 301-807
Sectional specification	IEC 384-4
Vibration resistance	in accordance with IEC 68-2–6, test Fc: displacement amplitude 0,75 mm, frequency range 10 to 55 Hz, acceleration max. 10 g, duration 3×2 h

Due to the current load capability of the contact elements, the following current limits must not be exceeded, even if the frequency and temperature factors have been taken into account:

Capacitor diameter	51,6 mm	64,3 mm	76,9 mm	91,0 mm
Maximum current	30 A	40 A	50 A	70 A

Accessories

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

	Thread	Toothed washers	Screws/Nuts	Maximum torque
For terminals	M 5	A 5,1 DIN 6797	Cylinder-head screw M 5 $\times$ 8 DIN 84-4.8	2 Nm
	M 6	A 6,4 DIN 6797	Cylinder-head screw M 6 $\times$ 12 DIN 85-4.8	2,5 Nm
For mounting	M 12	J 12,5 DIN 6797	Hex nut BM 12 DIN 439	10 Nm

The following must be ordered separately:

Ring clips

Clamps for capacitors with $d \geq 64,3$ mm

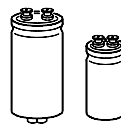
Insulating parts

B 44 030 (cf. [page 148](#))

B 44 030 (cf. [page 152](#))

B 44 020 (cf. [page 145](#))

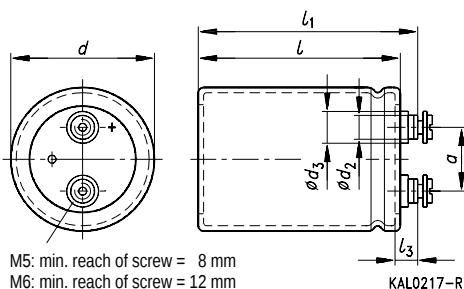
1) For case size 76,9 mm $\times$ 220,7 mm and $\varnothing$ 91 mm: IEC climatic category 25/105/56



Dimensional drawings

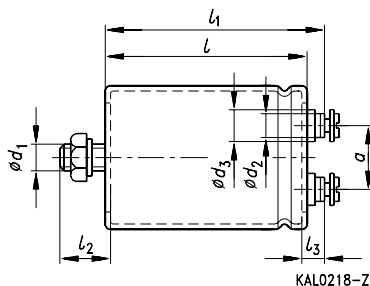
Type B 43 550

Ring clip/clamp mounting



Type B 43 570

Threaded stud mounting



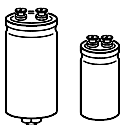
Positive pole marking: +

The base of all types with stud mounting and $d = 91$ mm is fully insulated (the lengths l and l_1 are increased by 0,5 mm in these cases). Also refer to the notes on mounting given on [page 147](#).

Ter- minal	Dimensions (mm) with insulating sleeve									Approx. wt. (g)
	d	$l \pm 1$	$l_1 \pm 1$	$l_2^{+0}_{-1}$	l_3	d_1	d_2 max	d_3 max	$a^{+0,2}_{-0,4}$	
M 5	51,6+ 0/- 0,8	80,7	87,2	17	7,0+ 0,2/- 1	M 12	8,2	13,5	22,2	220
M 5	51,6+ 0/- 0,8	105,7	112,2	17	7,0+ 0,2/- 1	M 12	8,2	13,5	22,2	280
M 5	64,3+ 0/- 0,8	105,7	112,2	17	7,0+ 0,2/- 1	M 12	8,2	13,5	28,5	440
M 6	76,9+ 0/- 0,7	97,0	103,3	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	540
M 6	76,9+ 0/- 0,7	143,2	149,0	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	840
M 6	76,9+ 0/- 0,7	220,7	226,5	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	1300
M 6	91,0+ 0/- 2	67,0	72,8	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	580
M 6	91,0+ 0/- 2	97,0	103,3	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	750
M 6	91,0+ 0/- 2	144,5	149,8	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	1200

Packing units

Capacitor diameter d	Packing units (pieces)
51,6 mm	36
64,3 mm	20
76,9 mm	16
91,0 mm	8



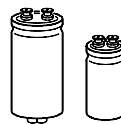
B 43 550
B 43 570

Optimized range

Overview of available types

U_R (V–)	160	250	350	400	450
C_R (μF)	Case dimensions $d \times l$ (mm)				
470				$51,6 \times 80,7$	$51,6 \times 105,7$
680			$51,6 \times 80,7$	$51,6 \times 105,7$	$91,0 \times 67,0$
1 000		$51,6 \times 80,7$	$51,6 \times 105,7$	$64,3 \times 105,7$	$64,3 \times 105,7$
1 500	$51,6 \times 80,7$	$51,6 \times 80,7$	$64,3 \times 105,7$	$76,9 \times 105,7$	$91,0 \times 97,0$
2 200	$51,6 \times 80,7$	$51,6 \times 105,7$	$76,9 \times 105,7$	$76,9 \times 143,2$	$91,0 \times 144,5$
3 300	$64,3 \times 105,7$	$64,3 \times 105,7$	$76,9 \times 143,2$	$76,9 \times 220,7$ $91,0 \times 144,5$	$76,9 \times 220,7$
4 700	$64,3 \times 105,7$	$76,9 \times 105,7$	$76,9 \times 220,7$ $91,0 \times 144,5$	$76,9 \times 220,7$	
6 000			$76,9 \times 220,7$		
6 800	$76,9 \times 105,7$	$76,9 \times 143,2$			
10 000	$76,9 \times 143,2$	$76,9 \times 220,7$ $91,0 \times 144,5$			
15 000	$76,9 \times 220,7$ $91,0 \times 144,5$				

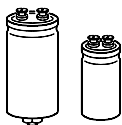
The capacitance and voltage ratings listed above are available in different cases upon request. Other voltage and capacitance ratings are also available upon request.



Technical data and ordering codes

U_R	C_R	Case dimensions $d \times l$ mm	$R_{ESR, \max}$ 100 Hz 20 °C mΩ	$Z_{\max}$ 10 kHz 20 °C mΩ	$I_{\max}$ 100 Hz 40 °C A	$I_{\max}$ 100 Hz 85 °C A	$I_{\max}$ 100 Hz 105 °C A	$I_{\max}$ 100 Hz 105 °C A	Ordering code ¹⁾
V-	μF								Short code
B43550-, B43570-									
160	1 500	51,6 × 80,7	68	67	14	8,5	4,1	7,4	-A1158-Q
	2 200	51,6 × 80,7	50	49	17	10	4,9	8,8	-C1228-Q
	3 300	64,3 × 105,7	35	34	24	15	7,0	11	-A1338-Q
	4 700	64,3 × 105,7	27	26	30	18	8,8	16	-A1478-Q
	6 800	76,9 × 105,7	24	23	39	23	11	22	-B1688-Q
	10 000	76,9 × 143,2	18	17	49	30	14	25	-B1109-Q
	15 000	76,9 × 220,7	17	16	50	38	18	26	-C1159-Q
	15 000	91,0 × 144,5	17	16	63	38	18	34	-J1159-Q
250	1 000	51,6 × 80,7	100	82	14	8,3	4,0	7,2	-C2108-Q
	1 500	51,6 × 80,7	62	59	18	11	5,2	11	-J2158-Q
	2 200	51,6 × 105,7	45	44	23	14	6,8	13	-B2228-Q
	3 300	64,3 × 105,7	33	32	30	18	8,7	16	-C2338-Q
	4 700	76,9 × 105,7	27	26	40	24	12	23	-C2478-Q
	6 800	76,9 × 143,2	23	22	50	30	15	25	-E2688-Q
	10 000	76,9 × 220,7	23	22	50	34	16	24	-A2109-Q
	10 000	91,0 × 144,5	23	22	56	34	16	31	-J2109-Q
350	680	51,6 × 80,7	130	100	13	8,0	3,8	7,5	-B4687-Q
	1 000	51,6 × 105,7	90	72	17	11	5,0	8,9	-J4108-Q
	1 500	64,3 × 105,7	60	52	23	14	6,5	11	-A4158-Q
	2 200	76,9 × 105,7	45	40	30	18	8,6	16	-B4228-Q
	3 300	76,9 × 143,2	30	29	39	24	11	19	-B4338-Q
	4 700	76,9 × 220,7	24	23	50	30	15	20	-C4478-Q
	4 700	91,0 × 144,5	24	23	51	31	15	26	-J4478-Q
	6 000	76,9 × 220,7	20	19	50	38	18	26	-C4608-Q

1) To obtain the required ordering code, prefix the type number to the short code. E. g.: B43550-A1158-Q
B43550-... (ring clip/clamp mounting)
B43570-... (with threaded stud)



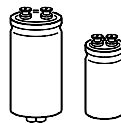
B 43 550
B 43 570

Optimized range

Technical data and ordering codes

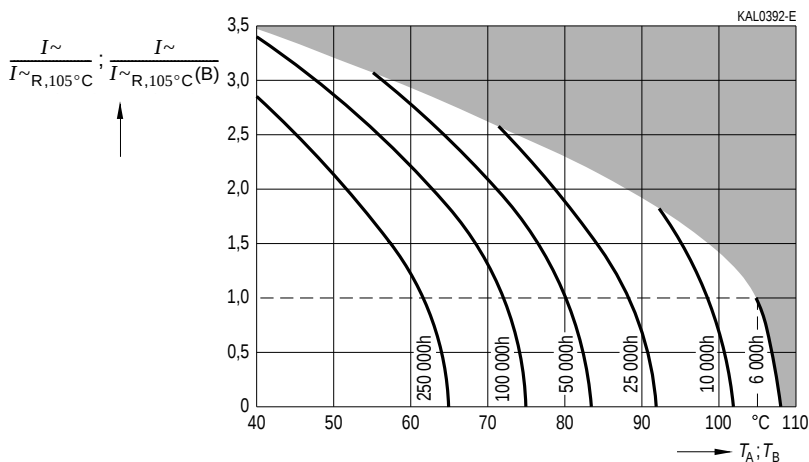
U_R	C_R	Case dimensions $d \times l$ mm	$R_{ESR, \max}$ 100 Hz 20 °C mΩ	$Z_{\max}$ 10 kHz 20 °C mΩ	$I_{\max}$ 100 Hz 40 °C A	$I_{\max}$ 100 Hz 85 °C A	I_R 100 Hz 105 °C A	$I_R(B)$ 100 Hz 105 °C A	Ordering code ¹⁾ Short code
V-	μF								
B43550-, B43570-									
400	470	51,6 × 80,7	280	230	11	6,3	3,0	5,8	-F477-Q
	680	51,6 × 105,7	200	160	14	8,2	3,9	6,7	-F687-Q
	1 000	64,3 × 105,7	150	120	17	10	4,9	8,2	-F108-Q
	1 500	76,9 × 105,7	100	80	23	14	6,6	12	-J158-Q
	2 200	76,9 × 143,2	72	60	29	18	8,5	14	-J228-Q
	3 300	76,9 × 220,7	52	45	40	24	12	16	-J338-Q
	3 300	91,0 × 144,5	52	45	43	26	13	22	-L338-Q
	4 700	76,9 × 220,7	40	36	50	31	15	21	-H478-Q
450	470	51,6 × 105,7	280	224	11	6,8	3,3	5,5	-A5477-Q
	680	91,0 × 67,0	200	45	16	9,9	4,8	11	-A5687-Q
	1 000	64,3 × 105,7	150	120	18	11	5,3	9,8	-A5108-Q
	1 500	91,0 × 97,0	100	80	26	16	7,5	16	-A5158-Q
	2 200	91,0 × 144,5	72	60	33	20	9,5	16	-A5228-Q
	3 300	76,9 × 220,7	52	45	44	27	13	18	-A5338-Q

1) To obtain the required ordering code, prefix the type number to the short code. E. g.: B43550-F477-Q
B43550-... (ring clip/clamp mounting)
B43570-... (with threaded stud)

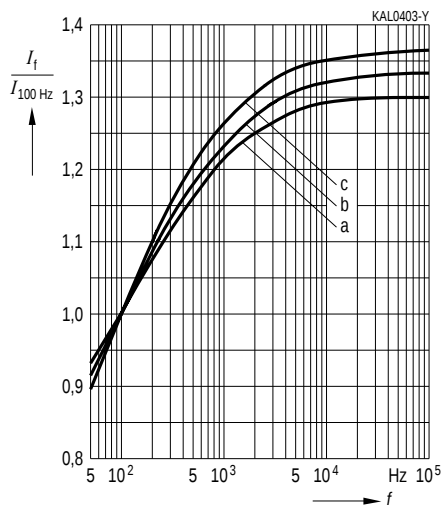


Useful life

versus ambient temperature T_A (for natural cooling) and versus temperature of case base T_B (for base cooling) under ripple current operating conditions¹⁾

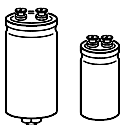


Permissible ripple current $I_{\sim}$ versus frequency f



d (mm)	51,6	64,3	76,9	91,0
Curve	c	b	a	c

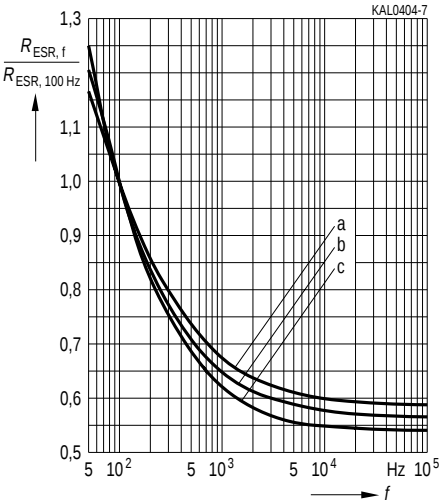
1) The ripple current refers to $I_{\sim R,105^{\circ}\text{C}}$ for natural cooling or to $I_{\sim R,105^{\circ}\text{C(B)}}$ for base cooling, respectively. Refer to [page 34](#) for an explanation on how to interpret the useful life graphs.



B 43 550
B 43 570

Optimized range

Equivalent series resistance R_{ESR}
versus frequency f
Typical behavior



d (mm)	51,6	64,3	76,9	91,0
Curve	c	b	a	a

Impedance Z
versus frequency f
Typical behavior

