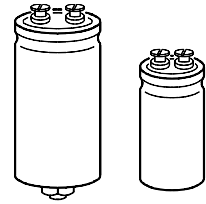


LL grade
Compact low-voltage type
For professional power supplies

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 are not insulated



KAL0272-T

B 41 580 B 41 560

Features

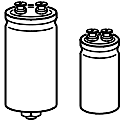
- High reliability, extremely good electrical characteristics
- High *CU* product, i. e. extremely compact
- High ripple current capability
- All-welded construction ensures reliable electrical contact
- Type with optimized construction for base cooling upon request
- Type with low inductance design upon request

Applications

- General industrial electronics
- Professional power supplies
- For link circuits in converters

Specifications and characteristics in brief

Rated voltage U_R	25 to 100 V-
Surge voltage U_S	$1,15 \cdot U_R$
Rated capacitance C_R	1 500 to 330 000 μ F
Capacitance tolerance	$\pm 20 \% \triangleq M$
Useful life	
40 °C, U_R	> 250 000 h ($2,2 \cdot I_{R,105}^\sim$)
85 °C, $U_R, I_{R,max}^\sim$	> 6 000 h
105 °C, $U_R, I_{R,105}^\sim$	> 3 000 h
Failure percentage	$\leq 1 \%$ (during useful life)
Failure rate	≤ 40 fit ($\leq 40 \cdot 10^{-9}/h$)
Voltage endurance test	2 000 h, 105 °C (at U_R)
Leakage current I_{lka} (5 min, 20 °C)	$I_{lka} \leq 0,3 \mu A \cdot \left(\frac{C_R}{\mu F} \cdot \frac{U_R}{V} \right)^{0,7} + 4 \mu A$
Self-inductance L_{ESL}	approx. 20 nH
IEC climatic category	in accordance with IEC 68-1 40/105/56 (-40 °C/+105 °C, 56 days damp heat test)


B 41 560
B 41 580

Specifications and characteristics in brief

Detail specification	similar to CECC 30 301-810
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 upper limits must not be exceeded.

Capacitor diameter	≤ 51,6 mm	64,3 mm	76,9 mm
$I_{\sim rms}$	30 A	40 A	50 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 × 8 DIN 84-4.8	2 Nm
	M 6	A 6,4 DIN 6797	Cylinder-head screw M 6 × 12 DIN 85-4.8	2,5 Nm
For mounting	M 8	J 8,2 DIN 6797	Hex nut BM 8 DIN 439	4 Nm
	M 12	J 12,5 DIN 6797	Hex nut BM 12 DIN 439	10 Nm

The following must be ordered separately:

Ring clips

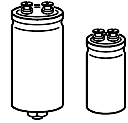
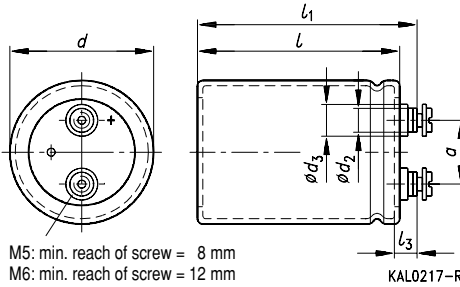
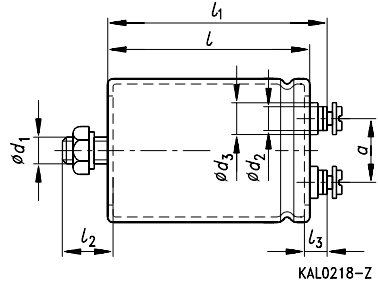
B 44 030 (cf. page 137)

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

B 44 030 (cf. page 141)

Insulating parts

B 44 020 (cf. page 134)


Dimensional drawings
Type B 41 560
 Ring clip/clamp mounting

Type B 41 580
 Threaded stud mounting


Positive pole marking: +

Screw terminals with UNF threads are available upon request.

Ter- minal	Dimensions (mm) with insulating sleeve										Approx. wt. (g)
	<i>d</i>	$l \pm 1$	$l_1 \pm 1$	$l_2 \begin{smallmatrix} +0 \\ -1 \end{smallmatrix}$	l_3	d_1	$d_2 \text{ max}$	$d_3 \text{ max}$	$a \begin{smallmatrix} +0,2 \\ -0,4 \end{smallmatrix}$		
M 5	35,7+ 0/- 0,8	55,7	62,2	13	7,0+ 0,2/- 1	M 8	8,2	13,5	12,7	65	
M 5	35,7+ 0/- 0,8	80,7	87,2	13	7,0+ 0,2/- 1	M 8	8,2	13,5	12,7	105	
M 5	35,7+ 0/- 0,8	105,7	112,2	13	7,0+ 0,2/- 1	M 8	8,2	13,5	12,7	135	
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	105,7	111,5	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	

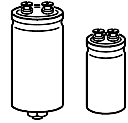
Packing units

Capacitor diameter <i>d</i>	Packing units (pieces)
35,7 mm	72
51,6 mm	36
64,3 mm	20
76,9 mm	16


B 41 560
B 41 580
Overview of available types

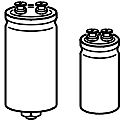
U_R (V-)	25	40	63	100
C_R (μ F)	Case dimensions $d \times l$ (mm)			
1500				35,7 × 55,7
2 200				35,7 × 80,7
3 300				35,7 × 80,7
4 700			35,7 × 55,7	35,7 × 105,7
6 800			35,7 × 80,7	51,6 × 80,7
10 000		35,7 × 55,7	35,7 × 105,7	51,6 × 105,7
15 000	35,7 × 55,7	35,7 × 80,7	51,6 × 80,7	64,3 × 105,7
22 000	35,7 × 80,7	35,7 × 105,7	51,6 × 105,7	76,9 × 105,7
33 000	35,7 × 80,7	51,6 × 80,7	64,3 × 105,7	76,9 × 143,2
47 000	35,7 × 105,7	51,6 × 105,7	64,3 × 105,7	
68 000	51,6 × 80,7	51,6 × 105,7	76,9 × 105,7	
100 000	51,6 × 105,7	64,3 × 105,7	76,9 × 143,2	
150 000	64,3 × 105,7	76,9 × 105,7		
220 000	76,9 × 105,7	76,9 × 143,2		
330 000	76,9 × 143,2			

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	$I_{~R}$ 100 Hz 105 °C A	Ordering code ¹⁾ Short code
V-	μF							
B41560-, B41580-								
25	15 000	35,7 × 55,7	42	31	18	11	5,3	-A5159-M
	22 000	35,7 × 80,7	29	22	25	15	7,4	-A5229-M
	33 000	35,7 × 80,7	20	17	30	18	8,8	-A5339-M
	47 000	35,7 × 105,7	16	13	30	23	11	-A5479-M
	68 000	51,6 × 80,7	12	9,3	30	26	13	-A5689-M
	100 000	51,6 × 105,7	9,4	7,6	30	30	15	-A5100-M
	150 000	64,3 × 105,7	8,0	6,4	40	38	18	-A5150-M
	220 000	76,9 × 105,7	7,0	5,6	50	40	20	-A5220-M
	330 000	76,9 × 143,2	6,4	5,1	50	50	24	-A5330-M
40	10 000	35,7 × 55,7	42	37	18	11	5,3	-A7109-M
	15 000	35,7 × 80,7	29	26	25	15	7,4	-A7159-M
	22 000	35,7 × 105,7	22	20	30	20	9,5	-A7229-M
	33 000	51,6 × 80,7	15	13	30	23	11	-A7339-M
	47 000	51,6 × 105,7	12	10	30	29	14	-A7479-M
	68 000	51,6 × 105,7	10	8,4	30	30	15	-A7689-M
	100 000	64,3 × 105,7	8,2	7,0	40	38	18	-A7100-M
	150 000	76,9 × 105,7	7,2	6,0	50	41	20	-A7150-M
	220 000	76,9 × 143,2	6,4	5,4	50	49	24	-A7220-M
63	4 700	35,7 × 55,7	60	64	15	9,2	4,4	-A8478-M
	6 800	35,7 × 80,7	44	46	20	12	6,0	-A8688-M
	10 000	35,7 × 105,7	30	33	28	17	8,1	-A8109-M
	15 000	51,6 × 80,7	22	21	30	19	9,1	-A8159-M
	22 000	51,6 × 105,7	16	16	30	25	12	-A8229-M
	33 000	64,3 × 105,7	12	12	40	31	15	-A8339-M
	47 000	64,3 × 105,7	10	9,4	40	35	17	-A8479-M
	68 000	76,9 × 105,7	8,0	7,8	50	39	19	-A8689-M
	100 000	76,9 × 143,2	6,6	6,6	50	48	23	-A8100-M

1) To obtain the required ordering code, prefix the type number to the short code. E. g.: B41560-A5159-M
 B41560-... (ring clip/clamp mounting)
 B41580-... (with threaded stud)

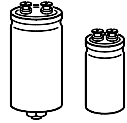

B 41 560
B 41 580
Technical data and ordering codes

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	$I_{\sim \max}$ 100 Hz 40 °C A	$I_{\sim \max}$ 100 Hz 85 °C A	I_{-R} 100 Hz 105 °C A	Ordering code ¹⁾ Short code
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B41560-, B41580-

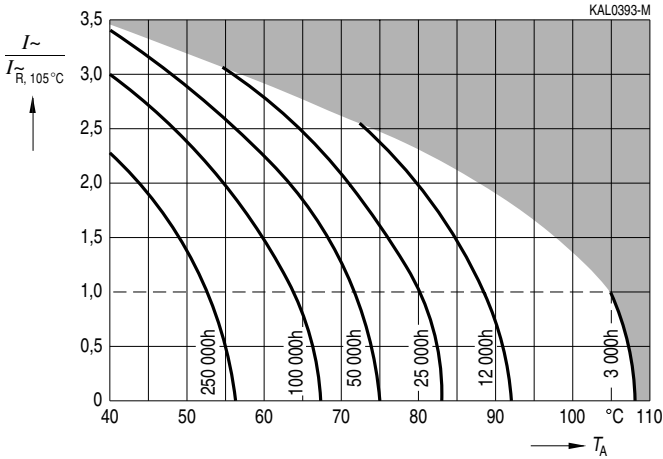
100	1 500	35,7 × 55,7	104	90	11	7,0	3,4	-A9158-M
	2 200	35,7 × 80,7	70	77	16	9,9	4,7	-A9228-M
	3 300	35,7 × 80,7	48	53	19	12	5,7	-A9338-M
	4 700	35,7 × 105,7	35	39	26	16	7,5	-A9478-M
	6 800	51,6 × 80,7	24	25	30	18	8,7	-A9688-M
	10 000	51,6 × 105,7	17	18	30	24	11	-A9109-M
	15 000	64,3 × 105,7	13	14	40	30	15	-A9159-M
	22 000	76,9 × 105,7	10	11	50	35	17	-A9229-M
	33 000	76,9 × 143,2	8,0	8,4	50	44	21	-A9339-M

1) To obtain the required ordering code, prefix the type number to the short code. E. g.: B41560-A9158-M
 B41560-... (ring clip/clamp mounting)
 B41580-... (with threaded stud)

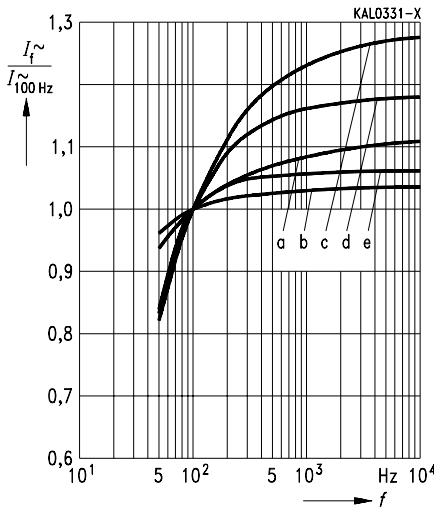


Useful life

versus ambient temperature T_A under ripple current operating conditions¹⁾

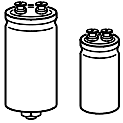


Permissible ripple current I_{\sim} versus frequency f



d (mm)	35,7	51,6	64,3	76,9
≤ 63 V-	a	a	a	b
100 V-	c	d	d	e

1) Refer to [page 31](#) for an explanation on how to interpret the useful life graphs.



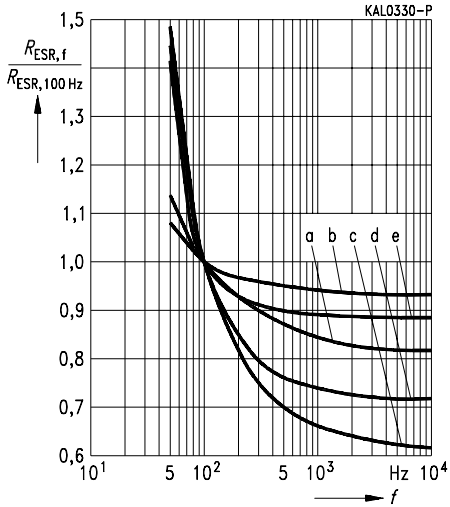
B 41 560

B 41 580

Equivalent series resistance R_{ESR}

versus frequency f

Typical behavior

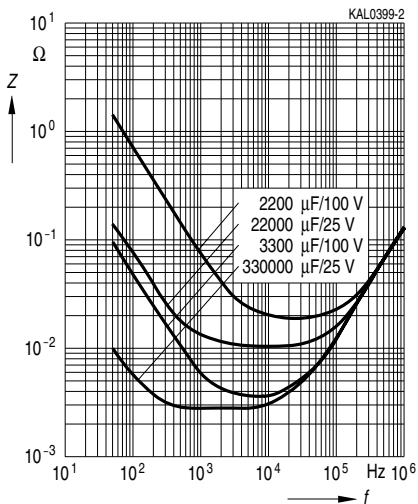


d (mm)	35,7	51,6	64,3	76,9
≤ 63 V-	a	a	a	b
100 V-	c	d	d	e

Impedance Z

versus frequency f

Typical behavior



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