

**Long-life grade capacitors
for professional applications****Applications**

- For use in output circuits of switch-mode power supplies of compact design
- For professional industrial electronics, telecommunications and data processing equipment

Features

- Lowest impedance at high frequency
- Lowest equivalent series resistance *ESR*
- High ripple current capability

Construction

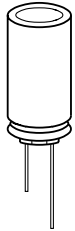
- Radial leads
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on the insulating sleeve
- Case with safety vent
- Stand off rubber seal

Delivery mode

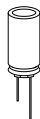
Special terminal configurations and packing:

- Bulk
- Taped, Ammo pack
- Cut
- Kinked

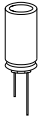
Refer to page 503 for further details and ordering example.



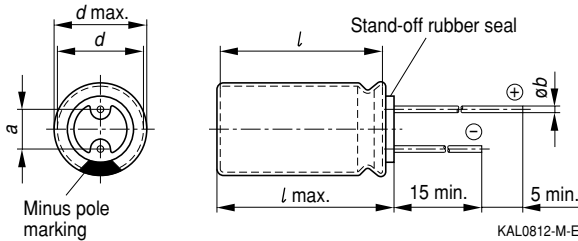
KAL0707-F


B41886
Lowest Impedance – 105 °C
Specifications and characteristics in brief

Rated voltage U_R	6,3 ... 25 VDC	
Surge voltage U_S	$1,15 \cdot U_R$	
Rated capacitance C_R	100 ... 2 200 μF	
Capacitance tolerance	$\pm 20 \% \triangleq \text{M}$	
Useful life 105 °C; U_R ; $I_{\sim R}$	> 4 000 h	Requirements: $\Delta C/C \leq \pm 40 \%$ of initial value $\tan \delta \leq 3$ times initial specified limit $I_L \leq$ initial specified limit Failure percentage: $\leq 1 \%$ Failure rate: $\leq 100 \text{ fit } (\leq 100 \cdot 10^{-9}/\text{h})$ (for definition "fit", refer to chapter "Quality", page 62)
Voltage endurance test 105 °C; U_R	2 000 h	Post test requirements: $\Delta C/C \leq \pm 30 \%$ of initial value $\tan \delta \leq 2$ times initial specified limit $I_L \leq$ initial specified limit
Vibration resistance	To IEC 68068-2-6, test Fc: displacement amplitude 0,75 mm, frequency range 10 ... 2 000 Hz, acceleration max. 10 g, duration $3 \times 2 \text{ h}$	
IEC climatic category	To IEC 60068-1: 40/105/56 (– 40 °C/+ 105 °C/56 days damp heat test)	
Sectional specification	IEC 60384-4	



Dimensional drawing



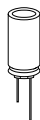
Dimensions and weights

Dimensions (mm)				Approx. weight g
$d \times l$	$d_{\max} \times l_{\max}$	$a \pm 0,5$	b	
8 × 11	8,5 × 12	3,5	$0,60 \pm 0,05$	1,0
10 × 16	10,5 × 17	5,0	$0,60 \pm 0,05$	1,9
10 × 20	10,5 × 22	5,0	$0,60 \pm 0,05$	2,6
12,5 × 25	13 × 27	5,0	$0,60 \pm 0,05$	4,5

Overview of available types

U_R (VDC)	6,3	10	16	25
C_R (μF)	Case dimensions $d \times l$ (mm)			
100				8 × 11
220			8 × 11	10 × 16
330		8 × 11	10 × 16	10 × 16
470	8 × 11	10 × 16	10 × 16	10 × 20
680	8 × 11			
1 000	10 × 16	10 × 20	10 × 20	12,5 × 25
1 500	10 × 20			
2 200	12,5 × 25	12,5 × 25		

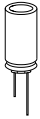
Other capacitance and voltage ratings are available upon request.


Technical data and ordering codes

U_R	C_R 120 Hz 20 °C μF	Case dimensions $d \times l$ mm	$I_{L, \max}$ 5 min 20 °C μA	$\tan \delta_{\max}$ 120 Hz 20 °C	$ESR_{\max}$ 120 Hz 20 °C Ω	$Z_{\max}$ 100 kHz 20 °C Ω	$I_{\sim R}$ 100 kHz 105 °C mA	Ordering code ¹⁾
VDC								
6,3	470	8 × 11	30	0,22	0,78	0,130	550	B41886A2477M00*
	680	8 × 11	43	0,22	0,54	0,110	660	B41886A2687M00*
	1 000	10 × 16	63	0,22	0,36	0,048	930	B41886A2108M00*
	1 500	10 × 20	95	0,22	0,24	0,028	1 440	B41886A2158M00*
	2 200	12,5 × 25	139	0,24	0,18	0,021	1 650	B41886A2228M00*
10	330	8 × 11	33	0,19	0,95	0,120	500	B41886A3337M00*
	470	10 × 16	47	0,19	0,67	0,084	760	B41886A3477M00*
	1 000	10 × 20	100	0,19	0,31	0,043	1 340	B41886A3108M00*
	2 200	12,5 × 25	220	0,21	0,16	0,024	1 940	B41886A3228M00*
16	220	8 × 11	35	0,16	1,21	0,084	640	B41886A4227M00*
	330	10 × 16	53	0,16	0,80	0,070	760	B41886A4337M00*
	470	10 × 16	75	0,16	0,56	0,059	1 050	B41886A4477M00*
	1 000	10 × 20	160	0,16	0,27	0,035	1 600	B41886A4108M00*
25	100	8 × 11	25	0,14	2,32	0,125	405	B41886A5107M00*
	220	10 × 16	55	0,14	1,06	0,084	740	B41886A5227M00*
	330	10 × 16	83	0,14	0,70	0,059	995	B41886A5337M00*
	470	10 × 20	118	0,14	0,49	0,043	1 300	B41886A5477M00*
	1 000	12,5 × 25	250	0,14	0,23	0,024	2 050	B41886A5108M00*

1) * = "0" for bulk version.

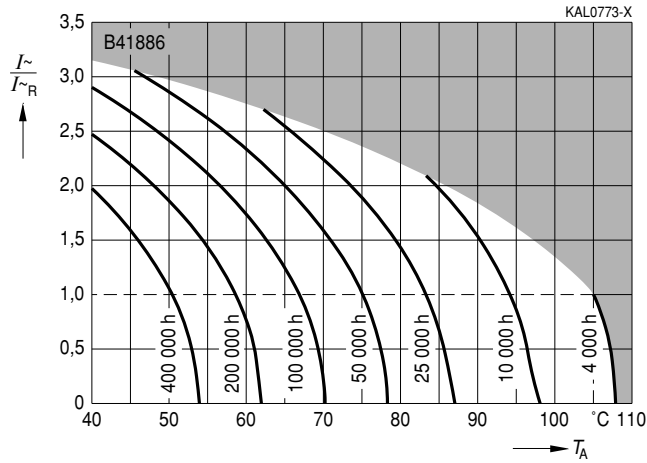
For taping versions, other lead configurations and packing information see page 503.



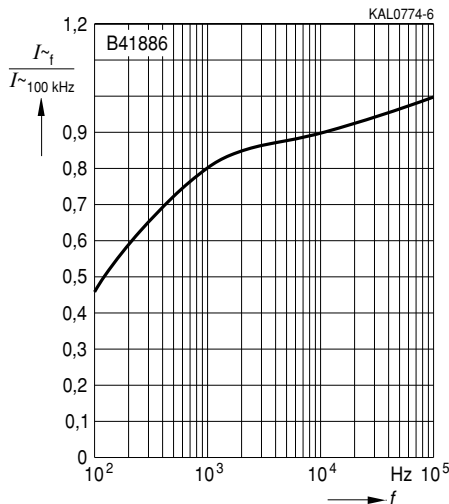
Useful life

depending on ambient temperature T_A under ripple current operating conditions¹⁾

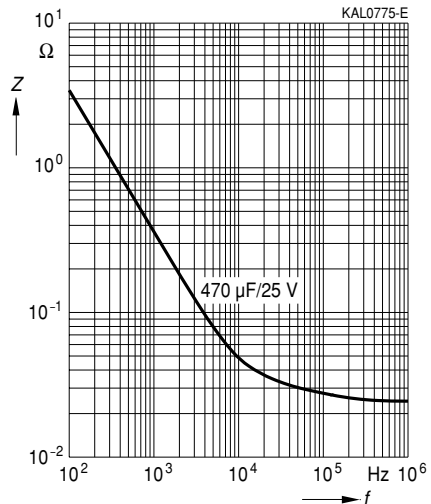
$U_R = 6,3 \dots 25 \text{ VDC}$



Frequency factor of permissible ripple current $I_{\sim}$ versus frequency f



Impedance Z versus frequency f Typical behavior at 20 °C



1) Refer to page 40 for an explanation on how to interpret the useful life graphs.

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