

**Long-life grade capacitors
for professional electronic ballasts**

Applications

- Energy-saving lamps
- Electronic ballasts
- Power supplies
- High-temperature environments

Features

- High ripple current capability
- Wide temperature range

Construction

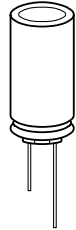
- Radial leads
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on insulating sleeve
- Case with safety vent
- Stand off rubber seal

Delivery mode

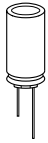
Special terminals configuration and packing:

- Bulk
- Taped, Ammo pack
- Cut
- Kinked

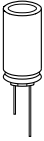
Refer to page 503 for further details and ordering example.



KAL0707-F


Specifications and characteristics in brief

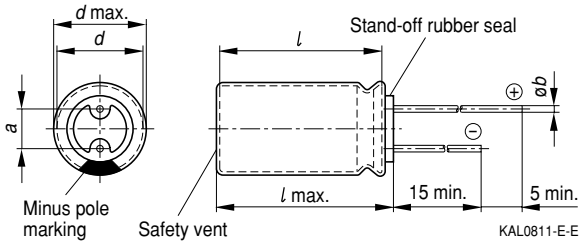
Rated voltage U_R	160 ... 350 VDC	
Surge voltage U_S	$1,1 \cdot U_R$	
Rated capacitance C_R	3,3 ... 220 μ F	
Capacitance tolerance	$\pm 20 \% \triangleq M$	
Useful life 125 °C; U_R ; $I_{\sim R}$	> 2 000 h	Requirements: $\Delta C/C \leq \pm 35 \%$ of initial value $\tan \delta \leq 3$ times initial specified limit $I_L \leq$ initial specified limit Failure percentage: $\leq 1 \%$ Failure rate: ≤ 100 fit ($\leq 100 \cdot 10^{-9}/h$) (for definition "fit", refer to chapter "Quality", page 62)
Voltage endurance test 125 °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
IEC climatic category	To IEC 60068-1: $U_R \leq 250$ V:40/125/56 (– 40 °C/+ 125 °C/56 days damp heat test) $U_R = 350$ V:25/125/56 (– 25 °C/+ 125 °C/56 days damp heat test)	
Sectional specification	IEC 60384-4	
Vibration resistance	To IEC 60068-2-6, test Fc: displacement amplitude 0,75 mm, frequency range 10 ... 2000 Hz, acceleration max. 10 g, duration 3 \times 2 h	



B43866

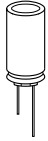
125 °C

Dimensional drawing



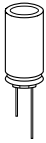
Dimensions and weights

Dimensions (mm)				Approx. weight
$d \times l$	$d_{max} \times l_{max}$	$a \pm 0,5$	b	g
10 × 16	10,5 × 17	5,0	0,60 ± 0,05	1,9
10 × 20	10,5 × 22	5,0	0,60 ± 0,05	2,6
12,5 × 20	13 × 22	5,0	0,60 ± 0,05	3,6
12,5 × 25	13 × 27	5,0	0,60 ± 0,05	4,5
16 × 20	16,5 × 22	7,5	0,80 ± 0,05	5,5
16 × 25	16,5 × 27	7,5	0,80 ± 0,05	7,5
16 × 31,5	16,5 × 33,5	7,5	0,80 ± 0,05	7,8
18 × 35	18,5 × 36	7,5	0,80 ± 0,1	13


Overview of available types

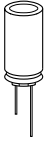
U_R (VDC)	160	200	250	350
C_R (μF)	Case dimensions $d \times l$ (mm)			
3,3				10 × 20
3,9				10 × 20
4,7				10 × 20
6,8				12,5 × 20
10	10 × 16	10 × 20	10 × 20	12,5 × 25
15		10 × 20	12,5 × 20	
22	10 × 20	12,5 × 20	12,5 × 25	16 × 25
33	12,5 × 20	12,5 × 25	12,5 × 25	16 × 31,5
47	12,5 × 25	12,5 × 25	16 × 31,5	
68	16 × 20	16 × 25		
100	16 × 25	16 × 31,5		
220	16 × 31,5	18 × 35		

Other voltage and capacitance ratings are also available upon request.


B43866
125 °C
Technical data and ordering codes

U_R	C_R	Case dimensions	I_L	$\tan \delta_{\max}$	ESR_{\max}	$I_{\sim R}$	Ordering code ¹⁾
VDC	120 Hz 20 °C μF	$d \times l$ mm	5 min 20 °C μA	120 Hz 20 °C	120 Hz 20 °C Ω	120 Hz 125 °C mA	
160	10	10 × 16	63	0,20	33,2	100	B43866A1106M00*
	22	10 × 20	95	0,20	15,1	150	B43866A1226M00*
	33	12,5 × 20	130	0,20	10,0	210	B43866A1336M00*
	47	12,5 × 25	175	0,20	7,1	290	B43866A1476M00*
	68	16 × 20	242	0,20	4,9	355	B43866A1686M00*
	100	16 × 25	495	0,20	3,3	480	B43866A1107M00*
	220	16 × 31,5	1071	0,20	1,51	520	B43866A1227M00*
200	10	10 × 20	65	0,20	33,2	105	B43866A2106M00*
	15	10 × 20	85	0,20	22,1	130	B43866A2156M00*
	22	12,5 × 20	113	0,20	15,1	185	B43866A2226M00*
	33	12,5 × 25	157	0,20	10,0	240	B43866A2336M00*
	47	12,5 × 25	213	0,20	7,1	290	B43866A2476M00*
	68	16 × 25	297	0,20	4,9	365	B43866A2686M00*
	100	16 × 31,5	615	0,20	3,3	510	B43866A2107M00*
	220	18 × 35	1335	0,20	1,51	550	B43866A2227M00*
	250	10	10 × 20	75	0,20	33,2	105
15		12,5 × 20	100	0,20	22,1	130	B43866F2156M00*
22		12,5 × 25	135	0,20	15,1	195	B43866F2226M00*
33		12,5 × 25	190	0,20	10,0	240	B43866F2336M00*
47		16 × 31,5	260	0,20	7,1	330	B43866F2476M00*
350		3,3	10 × 20	48	0,25	125,6	60
	3,9	10 × 20	52	0,25	106,3	70	B43866A4395M00*
	4,7	10 × 20	57	0,25	88,2	80	B43866A4475M00*
	6,8	12,5 × 20	72	0,25	61,0	95	B43866A4685M00*
	10	12,5 × 25	95	0,25	41,4	135	B43866A4106M00*
	22	16 × 25	179	0,25	18,8	215	B43866A4226M00*
	33	16 × 31,5	256	0,25	12,6	280	B43866A4336M00*

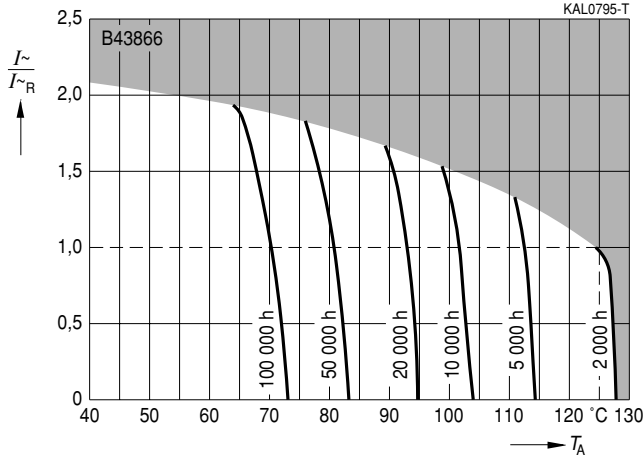
1) * = "0" for bulk version. For taping versions, other lead configurations and packing information see page 503.



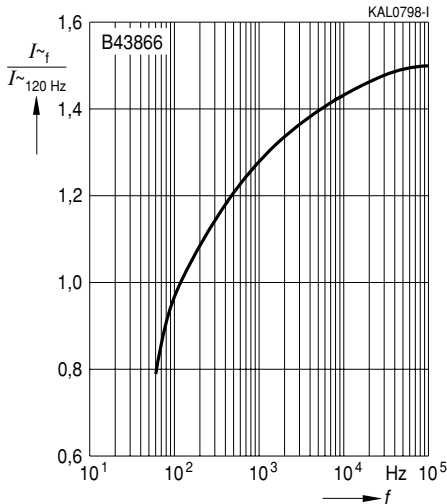
Useful life

depending on ambient temperature T_A under ripple current operating conditions¹⁾

$U_R = 160 \dots 350$ VDC

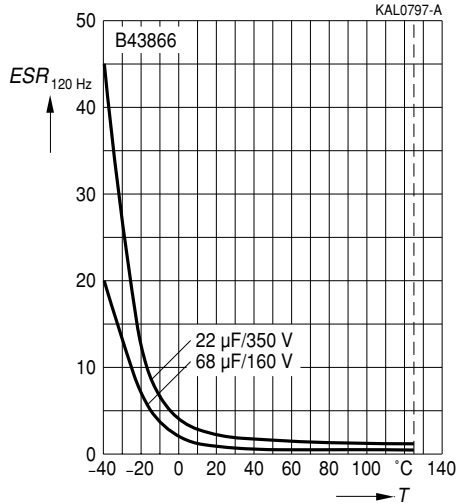


Frequency factor of permissible ripple current I_{\sim} versus frequency f

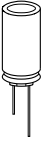


Equivalent series resistance ESR

versus temperature T
Typical behavior at 120 Hz



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



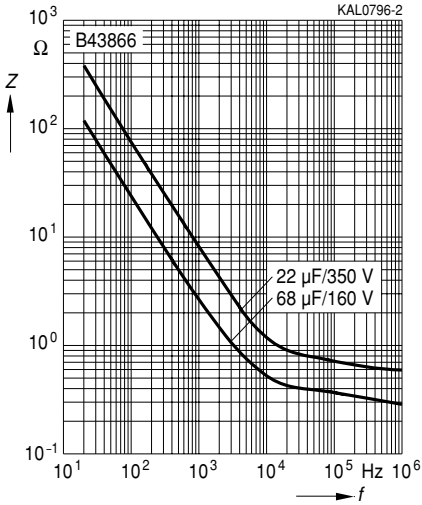
B43866

125 °C

Impedance Z

versus frequency f

Typical behavior at 20 °C



Herausgegeben von EPCOS AG

Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Vervielfältigung, Veröffentlichung, Verbreitung und Verwertung dieser Broschüre und ihres Inhalts ohne ausdrückliche Genehmigung der EPCOS AG nicht gestattet.

Bestellungen unterliegen den vom ZVEI empfohlenen Allgemeinen Lieferbedingungen für Erzeugnisse und Leistungen der Elektroindustrie, soweit nichts anderes vereinbart wird.

Diese Broschüre ersetzt die vorige Ausgabe.

Fragen über Technik, Preise und Liefermöglichkeiten richten Sie bitte an den Ihnen nächstgelegenen Vertrieb der EPCOS AG oder an unsere Vertriebsgesellschaften im Ausland. Bauelemente können aufgrund technischer Erfordernisse Gefahrstoffe enthalten. Auskünfte darüber bitten wir unter Angabe des betreffenden Typs ebenfalls über die zuständige Vertriebsgesellschaft einzuholen.

Published by EPCOS AG

Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.