

## Axial Aluminum Electrolytic Capacitors for Electronic Ballasts: B43698

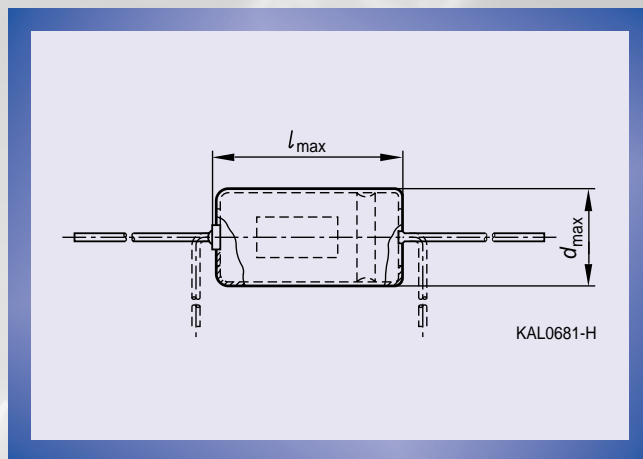
Specifications and characteristics in brief				Product	
Rated voltage	$U_R$	450		$V_{dc}$	
Surge voltage	$U_S$	550 V at 85 °C, 500 V at 105 °C		V	
Rated capacitance	$C_R$	6.8 ... 33		$\mu F$	
Capacitance tolerance	$\Delta C/C$	-10/+30 $\Delta Q$		%	
Useful life*	$t_{LD(CO)}$			h	
		40 °C, $U_R$	250 000 (2.2 $I_{\sim R, 105^\circ C}$ )		
		85 °C, $U_R$ , $I_{\sim R}$	50 000		
		85 °C, $U_R$ , $I_{\sim max}$	25 000		
		105 °C, $U_R$ , $I_{\sim R}$	10 000		
Voltage endurance test		5 000, 105 °C, $U_R$			
Leakage current (5 min, 20 °C)	$I_{LC}$	$I_{LC} \leq 0.3 \cdot \left( \frac{C_R}{\mu F} \cdot \frac{U_R}{V} \right)^{0.7} + 4$		$\mu A$	
Self-inductance	$L_{ESL}$	diam. (d mm)	12    14    16    18	nH	
		length (l mm)	approx. $L_{ESL}$		
		25	–    22    26    –		
		30	21    24    29    34		
		39	–    –    33    38		
IEC climatic category		in acc. with IEC 60068-1: 40/105/56 (-40 °C, +105 °C, 56 days damp heat test)			
Detail / Sectional spec.		similar to CECC 30 301-801 / IEC 60384-4			
Vibration resistance		in acc. with IEC 60068-2-6, test $F_c$ : displacement amplitude 0.75 mm, frequency range 10 to 55 Hz, acceleration max. 10 g, duration 3 x 2 h			



\*Ambient temperatures  
Failure rate  $\leq 20$  fit, ( $\leq 20 \cdot 10^{-9}/h$ ); failure percentage (during useful life)  $\leq 1$  %

### Features

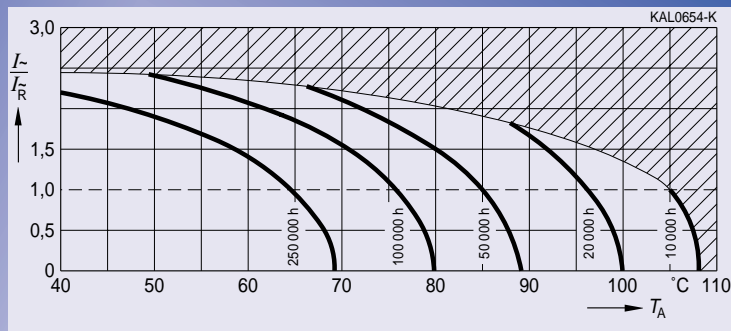
- $U_R$  450 V
- $C_R$  6.8  $\mu F$  ... 33  $\mu F$
- Very long useful life at 105 °C / 10 000 h
- High ripple current capability
- High voltage capability and operation  
550 V / 85 °C / 500 h,  
500 V / 105 °C / 2000 h
- High operating temperature capability at 125 °C / 420 V, using polyester insulation
- Strong and reliable performance in electronic ballast applications and similar designs



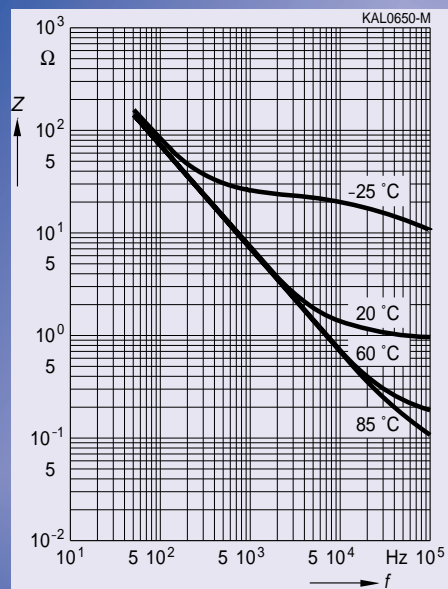
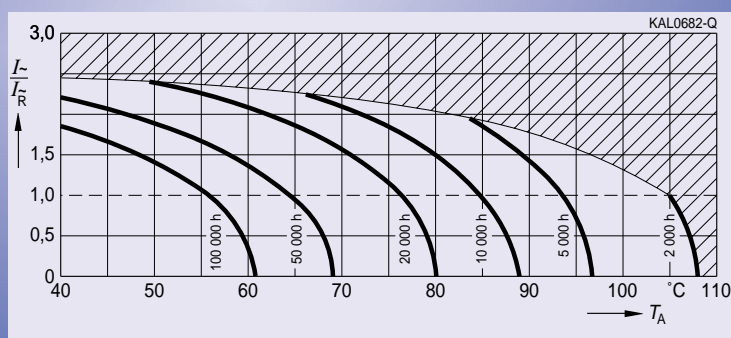
d x l (mm)	$d_{max} \times l_{max}$ (mm)	Mass (g)
12 x 30	12.5 x 30.5	5.1
14 x 25	14.5 x 25.5	5.7
14 x 30	14.5 x 30.5	6.8
16 x 30	16.5 x 30.5	8.9
16 x 39	16.5 x 40	11.7
18 x 30	18.5 x 30.5	11.1
18 x 39	18.5 x 40	14.7

## Diagrams and Characteristics: B43698

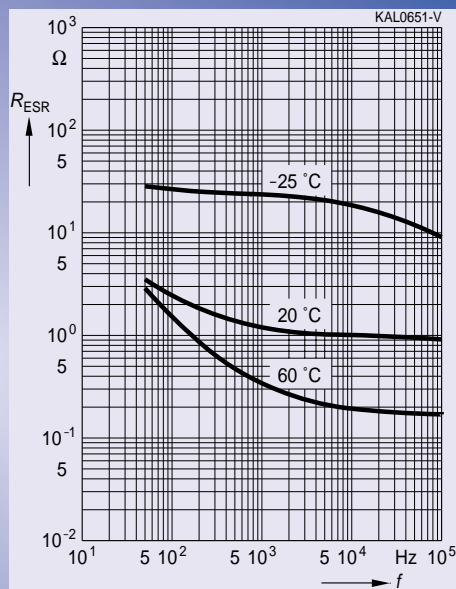
- Useful life depending on ambient temperature  $T_A$  under ripple current operating conditions
- Rated voltage  $U_R$  applied



- Useful life depending on ambient temperature  $T_A$  under ripple current operating conditions
- Operating voltage  $U_{op} = 500$  V

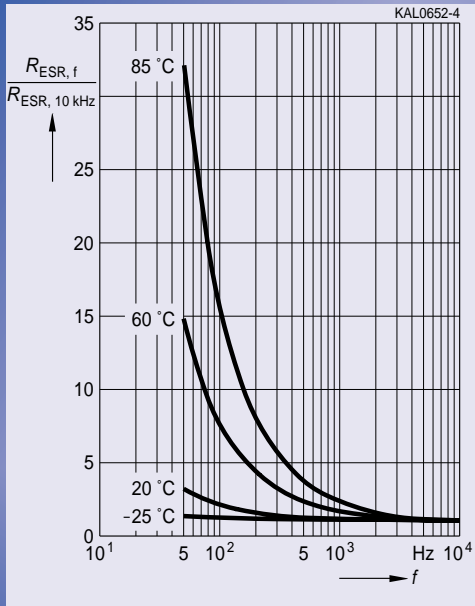


- Impedance  $Z$  versus frequency  $f$  at different temperatures
- Typical behavior for 22  $\mu$ F/450 V

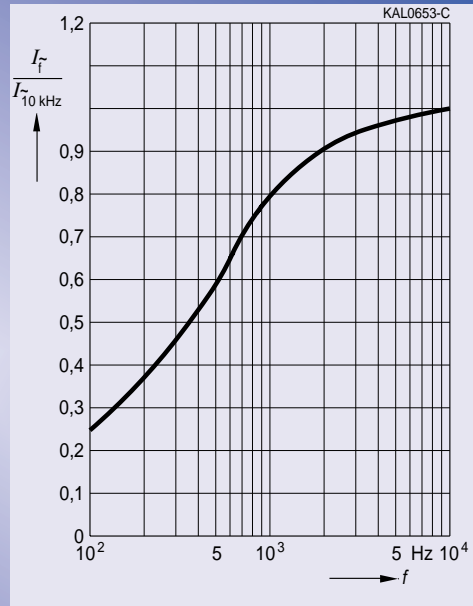


- Equivalent series resistance  $R_{ESR}$  versus frequency  $f$  at different temperatures
- Typical behavior for 22  $\mu$ F/450 V

## Diagrams and Characteristics: B43698



- Standardized equivalent series resistance versus frequency  $f$  at different temperatures
- Typical behavior



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

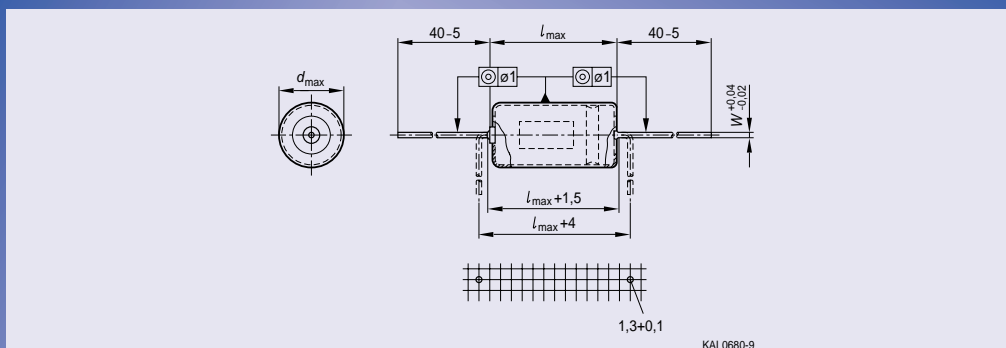
## Technical Data and Ordering Code

$U_R$	$C_R$	Case dimens. $d \times l$ mm	$R_{ESR, typ}$ 100 Hz 20 °C $\Omega$	$R_{ESR, max}$ 100 Hz 20 °C $\Omega$	$R_{ESR, max}$ 100 Hz -25 °C $\Omega$	$R_{ESR, max}$ 10 kHz 20 °C $\Omega$	$Z_{max}$ 100 kHz 20 °C $\Omega$	$I_{\sim max}$ 10 kHz 40 °C A	$I_{\sim max}$ 10 kHz 85 °C A	$I_{\sim R}$ 10 kHz 105 °C A	Ord. code Bulk	Ord. code Pallet	Ord. code Reel
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### B43698

450	6.8	12 x 30	7.2	12.0	180	5.5	5.4	1.00	0.82	0.43	A5685Q000	A5685Q007	A5685Q009
	10	14 x 30	4.9	8.1	120	3.8	3.7	1.30	1.05	0.55	A5106Q000	A5106Q007	A5106Q009
	15	16 x 30	3.2	5.4	80	2.5	2.4	1.75	1.35	0.73	A5156Q000	A5156Q007	A5156Q009
	22	16 x 39	2.2	3.7	50	1.7	1.6	2.40	1.90	1.00	A5226Q000	A5226Q007	
	33	18 x 39	1.5	2.5	40	1.2	1.1	3.00	2.40	1.25	A5336Q000	A5336Q007	

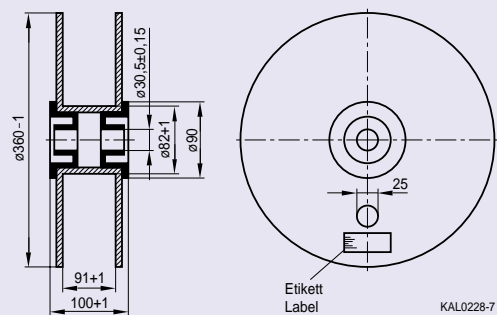
## Dimensional Drawings



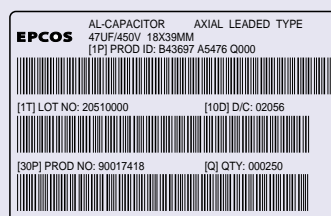
Dimensions (mm) d x l	d <sub>max</sub> x l <sub>max</sub>	Approximate mass (g)	wire W (mm)	Packing units		
				Bulk (pcs.)	Reel (pcs.)	Pallet (pcs.)
12 x 30	12.5 x 30.5	5.1	0.8	600	450	288
14 x 25	14.5 x 25.5	5.7	0.8	500	350	200
14 x 30	14.5 x 30.5	6.8	0.8	400	350	200
16 x 30	16.5 x 30.5	8.9	0.8	350	250	180
16 x 39	16.5 x 40	11.7	0.8	300	-	180
18 x 30	18.5 x 30.5	11.1	1.0	300	-	160
18 x 39	18.5 x 40	14.7	1.0	250	-	160

## Packing

### Axial-leaded capacitor (pallet/Q007; reel/Q009)



### Label



[1P] Ordering code (bulk, e.g.)  
 [1T] Lot number  
 [10D] Date code (yywwd)  
 [30P] Product number  
 [Q] Quantity

KAL0677-P-E

**Herausgegeben von EPCOS AG**

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**Published by EPCOS AG**

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