

### General-purpose grade capacitors

#### Applications

- General-purpose applications in the entertainment industry
- Semi-professional to professional application range
- Timer circuits

#### Features

- Low leakage current
- Miniaturized dimensions

#### Construction

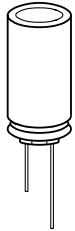
- Radial leads
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on the insulation sleeve
- Stand off rubber seal
- Case with safety vent from diameter 6,3 mm

#### Delivery mode

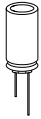
Special terminal configurations and packing:

- Bulk
- Taped, Ammo pack
- Cut

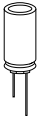
Refer to page 503 for further details and ordering example.



KAL0707-F


**Specifications and characteristics in brief**

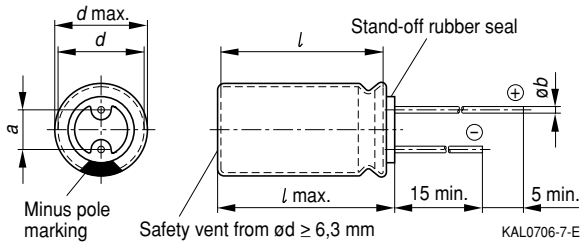
Rated voltage $U_R$	10 ... 63 VDC	
Surge voltage $U_S$	$1,15 \cdot U_R$	
Rated capacitance $C_R$	0,1 ... 100 $\mu$ F	
Capacitance tolerance	$\pm 20 \% \triangleq M$	
Useful life 85 °C; $U_R$ ; $I_{\sim R}$ 40 °C; $U_R$ ; $I_{\sim R}$	> 2 000 h > 100 000 h	Requirements: $\Delta C/C \leq \pm 45 \%$ of initial value $\tan \delta \leq 3$ times initial specified limit $I_L \leq$ initial specified limit Failure percentage: $\leq 1 \%$ Failure rate: $\leq 40$ fit ( $\leq 40 \cdot 10^{-9}/h$ ) (for definition "fit", refer to chapter "Quality", page 62)
Voltage endurance test 85 °C; $U_R$	2 000 h	Post test requirements: $\Delta C/C \leq \pm 20 \%$ of initial value $\tan \delta \leq 2$ times initial specified limit $I_L \leq$ initial specified limit
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	
IEC climatic category	To IEC 60068-1: 40/085/56 (– 40 °C/+ 85 °C/56 days damp heat test)	
Sectional specification	IEC 60384-4	



**B41825**

**Low Leakage Current – 85 °C**

**Dimensional drawing**



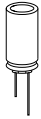
**Dimensions and weights**

Dimensions (mm)				Approx. weight g
$d \times l$	$d_{max} \times l_{max}$	$a \pm 0,5$	$b$	
5 × 11	5,5 × 12	2,0	0,50 ± 0,05	0,5
6,3 × 11	6,8 × 12	2,5	0,50 ± 0,05	0,7
8 × 11	8,5 × 12	3,5	0,60 ± 0,05	1,0

**Overview of available types**

$U_R$ (VDC)	10	16	25	63
$C_R$ (µF)	Case dimensions $d \times l$ (mm)			
0,10				5 × 11
0,22				5 × 11
0,33				5 × 11
0,47				5 × 11
0,68				5 × 11
1,0				5 × 11
2,2				5 × 11
3,3			5 × 11	6,3 × 11
4,7			5 × 11	6,3 × 11
6,8		5 × 11	6,3 × 11	
10		5 × 11	6,3 × 11	8 × 11
15		5 × 11		
22		6,3 × 11	8 × 11	
33		6,3 × 11	8 × 11	
47	6,3 × 11	8 × 11		
100	8 × 11			

Other capacitance and voltage ratings are available upon request.

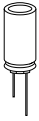

**Technical data and ordering codes**

$U_R$ VDC	$C_R$ 120 Hz 20 °C $\mu\text{F}$	Case dimensions $d \times l$ mm	$I_{L, \max}$ 2 min 20 °C $\mu\text{A}$	$\tan \delta_{\max}$ 120 Hz 20 °C	$ESR_{\max}$ 120 Hz 20 °C $\Omega$	$I_{\sim R}$ 120 Hz 85 °C mA	Ordering code <sup>1)</sup>	
10	47	6,3 × 11	0,94	0,20	7,0	66	B41825A3476M00*	
	100	8 × 11	2,0	0,20	4,0	110	B41825A3107M00*	
16	6,8	5 × 11	0,40	0,17	42	23	B41825A4685M00*	
	10	5 × 11	0,40	0,17	28	28	B41825A4106M00*	
	15	5 × 11	0,48	0,17	19	34	B41825A4156M00*	
	22	6,3 × 11	0,70	0,17	13	49	B41825A4226M00*	
	33	6,3 × 11	1,1	0,17	9,0	60	B41825A4336M00*	
	47	8 × 11	1,5	0,17	6,0	83	B41825A4476M00*	
	25	3,3	5 × 11	0,40	0,15	76	17	B41825A5335M00*
25	4,7	5 × 11	0,40	0,15	53	20	B41825A5475M00*	
	6,8	6,3 × 11	0,40	0,15	37	29	B41825A5685M00*	
25	10	6,3 × 11	0,50	0,15	25	35	B41825A5106M00*	
	22	8 × 11	1,1	0,15	11	60	B41825A5226M00*	
	33	8 × 11	1,7	0,15	8,0	74	B41825A5336M00*	
	63	0,10	5 × 11	0,40	0,08	1 326	1,0	B41825A8104M00*
		0,22	5 × 11	0,40	0,08	603	2,2	B41825A8224M00*
0,33		5 × 11	0,40	0,08	402	3,4	B41825A8334M00*	
0,47		5 × 11	0,40	0,08	282	4,8	B41825A8474M00*	
0,68		5 × 11	0,40	0,08	195	7,0	B41825A8684M00*	
1,0		5 × 11	0,40	0,08	133	8,0	B41825A8105M00*	
2,2		5 × 11	0,40	0,08	60	16	B41825A8225M00*	
3,3		6,3 × 11	0,42	0,08	40	22	B41825A8335M00*	
4,7		6,3 × 11	0,60	0,08	28	30	B41825A8475M00*	
10		8 × 11	1,3	0,08	13	50	B41825A8106M00*	

Preferred types

1) \* = "0" for bulk version.

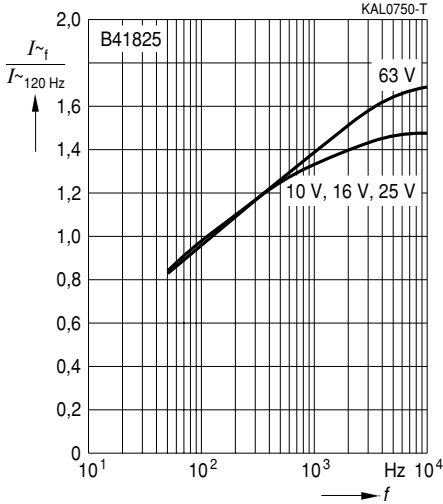
For taping versions, other lead configurations and packing information see page 503.



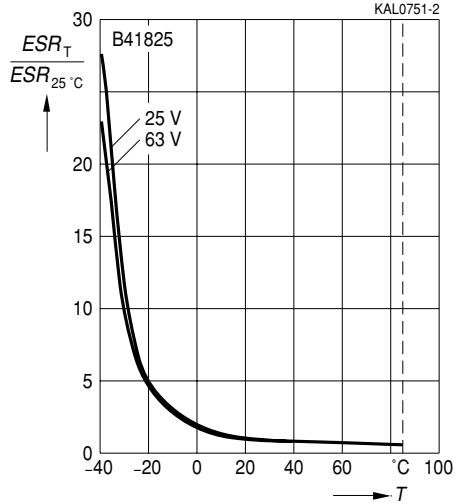
## B41825

Low Leakage Current – 85 °C

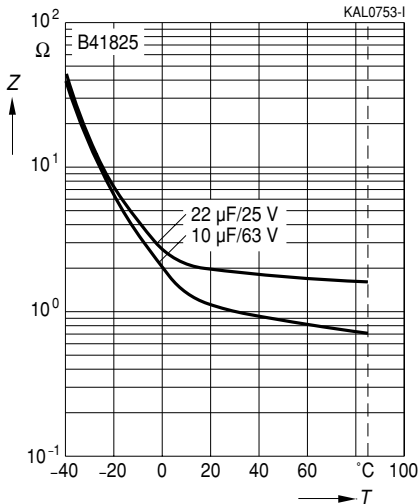
**Frequency factor of permissible ripple current  $I_{\sim}$  versus frequency  $f$**



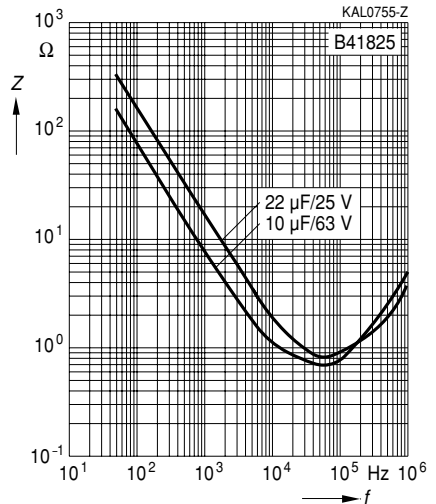
**Equivalent series resistance  $ESR$  at  $f = 120 \text{ Hz}$  versus temperature  $T$**   
Typical behavior

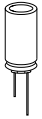


**Impedance  $Z$  at  $f = 10 \text{ kHz}$  versus temperature  $T$**   
Typical behavior



**Impedance  $Z$  versus frequency  $f$**   
Typical behavior at 20 °C

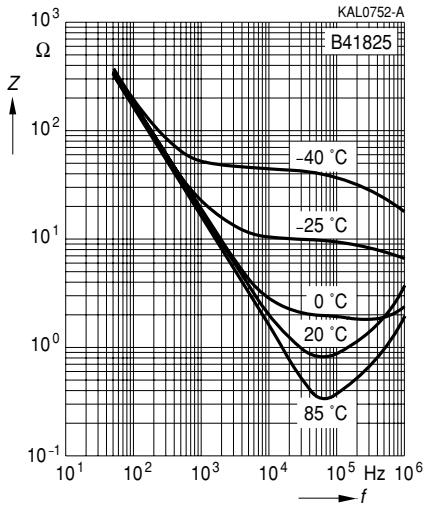



**Impedance  $Z$** 

 versus frequency  $f$  and temperature  $T$ 

 for 22  $\mu\text{F}/25\text{ V}$ 

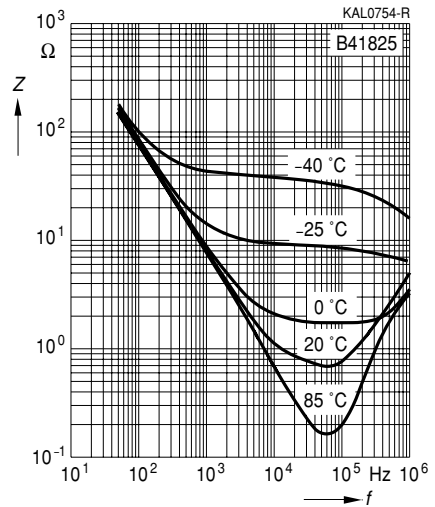
Typical behavior


**Impedance  $Z$** 

 versus frequency  $f$  and temperature  $T$ 

 for 10  $\mu\text{F}/63\text{ V}$ 

Typical behavior



**Herausgegeben von EPCOS AG**

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