

General-purpose grade capacitors
Ultra-miniaturized dimensions

Applications

- General-purpose applications,
mainly used in compact electronic equipments

Features

- Ultra-miniaturized dimensions
- Low profile

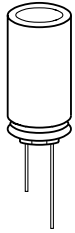
Construction

- Dimension 4 × 5 mm
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on the insulation sleeve
- Stand off rubber seal

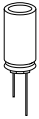
Delivery mode

- Bulk
- Taped, Ammo pack

Refer to page 503 for further details and ordering example.



KAL0707-F



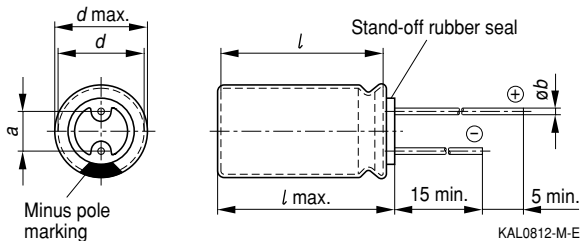
B41852

Low Profile – 105 °C

Specifications and characteristics in brief

Rated voltage U_R	10 ... 50 VDC	
Surge voltage U_S	$1,15 \cdot U_R$	
Rated capacitance C_R	0,1 ... 15 μ F	
Capacitance tolerance	$\pm 20 \% \triangleq M$	
Useful life 105 °C; U_R ; I_R	> 1 000 h	Requirements: $\Delta C/C \leq \pm 50 \%$ of initial value $\tan \delta \leq 3$ times initial specified limit $I_L \leq$ initial specified limit Failure percentage: $\leq 3 \%$ Failure rate: ≤ 100 fit ($\leq 100 \cdot 10^{-9}/h$) (for definiton "fit", refer to chapter "Quality", page 62)
Voltage endurance test 105 °C; U_R	1 000 h	Post test requirements: $\Delta C/C \leq \pm 25 \%$ 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 3×2 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	

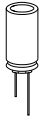
Dimensional drawing



KAL0812-M-E

Dimensions and weight

Dimensions (mm)				Approx. weight
$d \times l$	$d_{max} \times l_{max}$	$a \pm 0,5$	b	g
4 × 5	4,5 × 6	1,5	0,45 ± 0,05	0,3


Overview of available types

U_R (VDC)	10	16	25	35	50
C_R (μ F)	Case dimensions $d \times l$ (mm)				
0,1					4 × 5
0,22					4 × 5
0,33					4 × 5
0,47					4 × 5
1					4 × 5
2,2					4 × 5
3,3				4 × 5	4 × 5
4,7			4 × 5	4 × 5	
10		4 × 5			
15	4 × 5				

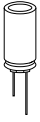
Other capacitance and voltage ratings are available upon request.

Technical data and ordering codes

U_R	C_R	Case dimensions	$I_{L, \max}$	$\tan \delta_{\max}$	ESR_{\max}	$I_{\sim R}$	Ordering code ¹⁾
VDC	120 Hz 20 °C μ F	$d \times l$ mm	5 min 20 °C μ A	120 Hz 20 °C	120 Hz 20 °C Ω	120 Hz 105 °C mA	
10	15	4 × 5	3,0	0,20	18	20	B41852A3156M00*
16	10	4 × 5	3,0	0,17	23	18	B41852A4106M00*
25	4,7	4 × 5	3,0	0,15	42	13	B41852A5475M00*
35	3,3	4 × 5	3,0	0,12	48	11	B41852A7335M00*
	4,7	4 × 5	3,0	0,12	34	14	B41852A7475M00*
50	0,10	4 × 5	3,0	0,10	1 326	1,0	B41852A6104M00*
	0,22	4 × 5	3,0	0,10	603	2,0	B41852A6224M00*
	0,33	4 × 5	3,0	0,10	402	3,0	B41852A6334M00*
	0,47	4 × 5	3,0	0,10	282	3,8	B41852A6474M00*
	1,0	4 × 5	3,0	0,10	133	6,0	B41852A6105M00*
	2,2	4 × 5	3,0	0,10	60	11	B41852A6225M00*
	3,3	4 × 5	3,0	0,10	40	13	B41852A6335M00*

1) * = "0" for bulk version.

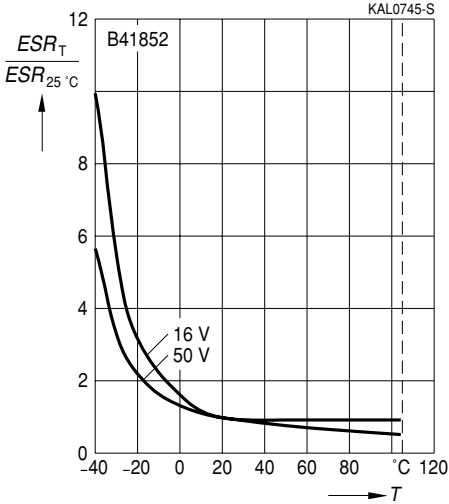
For taping versions, other lead configurations and packing information see page 503



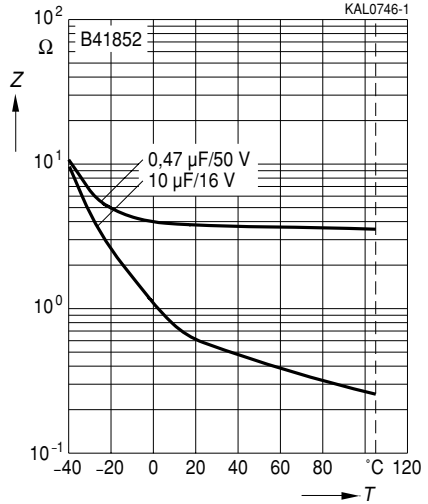
B41852

Low Profile – 105 °C

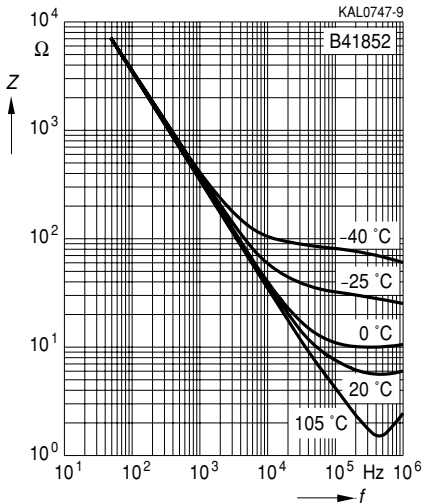
Equivalent series resistance ESR
at $f = 120 \text{ Hz}$ versus temperature T
Typical behavior



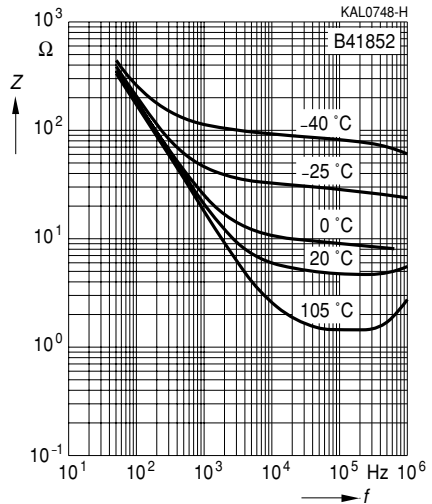
Impedance Z at $f = 10 \text{ kHz}$
versus temperature T
Typical behavior

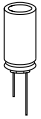


Impedance Z
versus frequency f and temperature T
for $0.47 \mu\text{F}/50 \text{ VDC}$
Typical behavior



Impedance Z
versus frequency f and temperature T
for $10 \mu\text{F}/16 \text{ VDC}$
Typical behavior

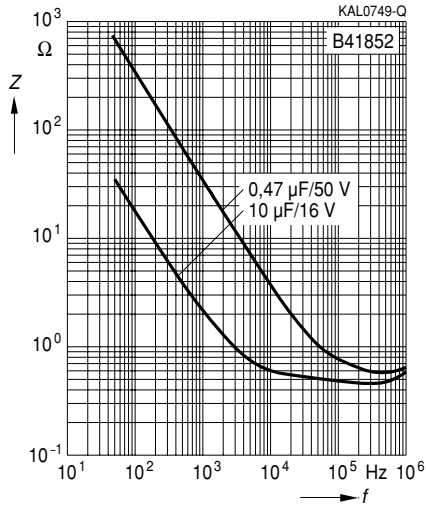




Impedance Z

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.