

General-purpose grade capacitors

Applications

- General-purpose applications in the entertainment industry
- Semi-professional to professional application range
- For filtering, coupling and pulse circuits

Features

- Miniaturized dimensions
- High CU product, i.e. very compact
- Good electrical characteristics
- Replaces all old series B41822 / B43822 / B41835 / B43835

Construction

- Radial leads
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on the insulating 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
- Kinked
- PAPR (protection against polarity reversal)

Refer to page 503 for further details and ordering example.



KAL0707-F


B41821 / B43821
Standard Series – 85 °C
Specifications and characteristics in brief

| Type | B41821 | B43821 |
|---------------------------------------|--|---------------------------------|
| Rated voltage U_R | 6,3 ... 100 VDC | 160 ... 450 VDC |
| Surge voltage U_S | $1,15 \cdot U_R$ | $1,1 \cdot U_R$ |
| Rated capacitance C_R | 0,1 ... 10 000 μF | 0,47 ... 560 μF |
| Capacitance tolerance | $\pm 20 \% \triangleq \text{M}$ | $\pm 20 \% \triangleq \text{M}$ |
| Useful life | | |
| 85 °C; U_R ; $I_{\sim R}$ | > 2 000 h | > 3 000 h |
| 40 °C; U_R ; $1,3 \cdot I_{\sim R}$ | > 100 000 h | — |
| 40 °C; U_R ; $1,6 \cdot I_{\sim R}$ | — | > 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: ≤ 100 fit ($\leq 100 \cdot 10^{-9}/\text{h}$) (for definition "fit", refer to chapter "Quality", page 62) | |
| Voltage endurance test | | |
| 85 °C; U_R | 2 000 h | 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 60068-2, 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: $U_R \leq 250$ V: 40/085/56 (– 40 °C/+ 85 °C/56 days damp heat test) $U_R \geq 350$ V: 25/085/56 (– 25 °C/+ 85 °C/56 days damp heat test) | |
| Sectional specification | IEC 60384-4 | |


Dimensional drawing

Dimensions and weights

| Dimensions (mm) | | | | Approx. weight |
|-----------------|--|-------------|-------------|----------------|
| $d \times l$ | $d_{\text{max}} \times l_{\text{max}}$ | $a \pm 0,5$ | b | g |
| 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 |
| 10 × 12,5 | 10,5 × 13,5 | 5,0 | 0,60 ± 0,05 | 1,6 |
| 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 × 31,5 | 18,5 × 32,5 | 7,5 | 0,80 ± 0,1 | 11 |
| 18 × 35 | 18,5 × 36 | 7,5 | 0,80 ± 0,1 | 13 |
| 18 × 40 | 18,5 × 41 | 7,5 | 0,80 ± 0,1 | 16 |
| 20 × 30 | 20,5 × 32 | 10,0 | 0,80 ± 0,1 | 14 |
| 20 × 35 | 20,5 × 37 | 10,0 | 0,80 ± 0,1 | 18 |
| 20 × 40 | 20,5 × 42 | 10,0 | 0,80 ± 0,1 | 20 |
| 22 × 35 | 22,5 × 37 | 10,0 | 1,0 ± 0,1 | 21 |
| 22 × 40 | 22,5 × 42 | 10,0 | 1,0 ± 0,1 | 23 |


B41821 / B43821
Standard Series – 85 °C
Overview of available types
B41821

| U_R (VDC) | 6,3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
|-------------|-----------------------------------|-----------|-----------|------------------------|-----------|-----------|--------------------|-----------|
| C_R (μF) | Case dimensions $d \times l$ (mm) | | | | | | | |
| 0,1 | | | | | | | | 5 × 11 |
| 0,22 | | | | | | | | 5 × 11 |
| 0,33 | | | | | | | | 5 × 11 |
| 0,47 | | | | | | | | 5 × 11 |
| 0,68 | | | | | | | | 5 × 11 |
| 1 | | | | | | | | 5 × 11 |
| 1,5 | | | | | | | | 5 × 11 |
| 2,2 | | | | | | | | 5 × 11 |
| 3,3 | | | | | | | | 5 × 11 |
| 4,7 | | | | | | | | 5 × 11 |
| 6,8 | | | | | | | 5 × 11 | 5 × 11 |
| 10 | | | | | | 5 × 11 | 5 × 11 | 6,3 × 11 |
| 22 | | | | | | 5 × 11 | 6,3 × 11 | 8 × 11 |
| 33 | | | | | 5 × 11 | 6,3 × 11 | 6,3 × 11 | 10 × 12,5 |
| 47 | | | | 5 × 11 | 5 × 11 | 6,3 × 11 | 8 × 11 | 10 × 12,5 |
| 68 | | | 5 × 11 | 6,3 × 11 | 6,3 × 11 | 8 × 11 | 10 × 12,5 | 10 × 16 |
| 100 | | 5 × 11 | 5 × 11 | 6,3 × 11 | 6,3 × 11 | 8 × 11 | 10 × 12,5 | 10 × 20 |
| 150 | | 6,3 × 11 | 6,3 × 11 | 8 × 11 | 8 × 11 | 10 × 12,5 | 10 × 16 | 12,5 × 25 |
| 220 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 12,5 × 25 |
| 270 | 6,3 × 11 | 8 × 11 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 20 | 16 × 25 |
| 330 | 6,3 × 11 | 8 × 11 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 20 | 16 × 25 |
| 470 | 8 × 11 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 20 | 12,5 × 25 | 16 × 31,5 |
| 560 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 20 | 12,5 × 25 | 16 × 20 | 16 × 31,5 |
| 680 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 20 | 10 × 20 | 12,5 × 25 | 16 × 25 | 20 × 30 |
| 1 000 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 20 | 12,5 × 25 | 16 × 20 | 16 × 31,5 | 20 × 40 |
| 1 500 | 10 × 16 | 10 × 20 | 12,5 × 25 | 12,5 × 25 | 16 × 25 | 16 × 31,5 | 18 × 35 | |
| 2 200 | 10 × 20 | 10 × 20 | 12,5 × 25 | 12,5 × 25 16,0 × 20 | 16 × 25 | 18 × 35 | 18 × 40 20 × 40 | |
| 3 300 | 10 × 20 | 12,5 × 25 | 16 × 25 | 16 × 25 | 18 × 31,5 | 18 × 40 | | |
| 4 700 | 12,5 × 25 | 16 × 20 | 16 × 25 | 16 × 31,5 | 18 × 40 | 22 × 40 | | |
| 6 800 | | 16 × 31,5 | 18 × 31,5 | 18 × 40 | 22 × 40 | | | |
| 8 200 | | 18 × 31,5 | 20 × 30 | 22 × 35 | | | | |
| 10 000 | | 18 × 35 | 20 × 35 | 22 × 40 | | | | |


B43821

| U_R (VDC) | 160 | 200 | 250 | 350 | 400 | 450 |
|------------------|-----------------------------------|-----------|------------------------|-----------|----------------------|-----------|
| C_R (μ F) | Case dimensions $d \times l$ (mm) | | | | | |
| 0,47 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | | |
| 0,68 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | | |
| 1 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | | |
| 1,5 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | 8 × 11 | | |
| 2,2 | 6,3 × 11 | 6,3 × 11 | 6,3 × 11 | 8 × 11 | 10 × 12,5 | 10 × 12,5 |
| 3,3 | 6,3 × 11 | 6,3 × 11 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 |
| 4,7 | 6,3 × 11 | 8 × 11 | 8 × 11 | 10 × 12,5 | 10 × 16 | 10 × 20 |
| 6,8 | 8 × 11 | 10 × 12,5 | 10 × 12,5 | 10 × 16 | 10 × 16 | 10 × 20 |
| 10 | 8 × 11 | 10 × 12,5 | 10 × 16 | 10 × 20 | 10 × 20 | 12,5 × 25 |
| 22 | 10 × 16 | 10 × 20 | 10 × 20 | 12,5 × 25 | 12,5 × 25 16 × 20 | 16 × 25 |
| 33 | 10 × 20 | 10 × 20 | 12,5 × 20 12,5 × 25 | 16 × 25 | 16 × 25 | 16 × 31,5 |
| 47 | 12,5 × 25 | 12,5 × 25 | 12,5 × 25 16 × 20 | 16 × 25 | 16 × 31,5 | 18 × 31,5 |
| 68 | 12,5 × 25 16 × 20 | 16 × 20 | 16 × 25 | 18 × 31,5 | 18 × 31,5 | 18 × 35 |
| 100 | 16 × 25 | 16 × 25 | 16 × 31,5 | 20 × 30 | 20 × 35 | 20 × 40 |
| 150 | 16 × 31,5 | 18 × 31,5 | 18 × 40 | 20 × 40 | 20 × 40 | |
| 220 | 18 × 31,5 | 18 × 35 | 18 × 40 | | | |
| 270 | 18 × 40 | 20 × 35 | 22 × 35 | | | |
| 330 | 20 × 30 | 22 × 35 | 22 × 40 | | | |
| 470 | 22 × 35 | | | | | |
| 560 | 22 × 40 | | | | | |

Other capacitance and voltage ratings are available upon request.


B41821 / B43821
Standard Series – 85 °C
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 μF | $d \times l$ mm | 5 min 20 °C μA | 120 Hz 20 °C | 120 Hz 20 °C Ω | 120 Hz 85 °C mA | |

B41821

| | | | | | | | |
|--------|-----------|-----------|------|------|-------|-------------------------------|-------------------------------|
| 6,3 | 220 | 6,3 × 11 | 14 | 0,28 | 2,1 | 200 | B41821A2227M00* |
| | 270 | 6,3 × 11 | 17 | 0,28 | 1,7 | 210 | B41821A2277M00* |
| | 330 | 6,3 × 11 | 21 | 0,28 | 1,4 | 270 | B41821A2337M00* |
| | 470 | 8 × 11 | 30 | 0,28 | 1,0 | 330 | B41821A2477M00* |
| | 560 | 8 × 11 | 35 | 0,28 | 0,83 | 360 | B41821A2567M00* |
| | 680 | 10 × 12,5 | 43 | 0,28 | 0,68 | 460 | B41821A2687M00* |
| | 1 000 | 10 × 12,5 | 63 | 0,28 | 0,46 | 560 | B41821A2108M00* |
| | 1 500 | 10 × 16 | 95 | 0,28 | 0,31 | 750 | B41821A2158M00* |
| | 2 200 | 10 × 20 | 139 | 0,30 | 0,23 | 950 | B41821A2228M00* |
| 10 | 3 300 | 10 × 20 | 208 | 0,32 | 0,16 | 1 050 | B41821A2338M00* ²⁾ |
| | 4 700 | 12,5 × 25 | 296 | 0,34 | 0,12 | 1 300 | B41821A2478M00* ²⁾ |
| | 100 | 5 × 11 | 10 | 0,24 | 4,0 | 145 | B41821A3107M00* |
| | 150 | 6,3 × 11 | 15 | 0,24 | 2,7 | 160 | B41821A3157M00* |
| | 220 | 6,3 × 11 | 22 | 0,24 | 1,8 | 240 | B41821A3227M00* |
| | 270 | 8 × 11 | 27 | 0,24 | 1,5 | 255 | B41821A3277M00* |
| | 330 | 8 × 11 | 33 | 0,24 | 1,2 | 280 | B41821A3337M00* |
| | 470 | 8 × 11 | 47 | 0,24 | 0,85 | 400 | B41821A3477M00* |
| | 560 | 10 × 12,5 | 56 | 0,24 | 0,71 | 420 | B41821A3567M00* |
| | 680 | 10 × 12,5 | 68 | 0,24 | 0,59 | 460 | B41821A3687M00* |
| | 1 000 | 10 × 12,5 | 100 | 0,24 | 0,40 | 640 | B41821A3108M00* |
| 1 500 | 10 × 20 | 150 | 0,24 | 0,27 | 730 | B41821A3158M00* | |
| 2 200 | 10 × 20 | 220 | 0,26 | 0,20 | 1 040 | B41821A3228M00* | |
| 3 300 | 12,5 × 25 | 330 | 0,28 | 0,14 | 1 450 | B41821A3338M00* | |
| 4 700 | 16 × 20 | 470 | 0,30 | 0,11 | 1 540 | B41821A3478M00* ²⁾ | |
| 6 800 | 16 × 31,5 | 680 | 0,34 | 0,08 | 2 110 | B41821A3688M00* ²⁾ | |
| 8 200 | 18 × 31,5 | 820 | 0,38 | 0,08 | 2 310 | B41821A3828M00* ²⁾ | |
| 10 000 | 18 × 35 | 1 000 | 0,42 | 0,07 | 2 520 | B41821A3109M00* ²⁾ | |

Preferred types

1) * = "0" for bulk version.

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

2) Type available upon request


Technical data and ordering codes

| U_R VDC | C_R 120 Hz 20 °C μF | Case dimensions $d \times l$ mm | $I_{L, \text{max}}$ 5 min 20 °C μA | $\tan \delta_{\text{max}}$ 120 Hz 20 °C | ESR_{max} 120 Hz 20 °C Ω | $I_{\sim R}$ 120 Hz 85 °C mA | Ordering code ¹⁾ |
|--------------|---|--|--|---|---|---------------------------------------|-------------------------------|
| 16 | 68 | 5 × 11 | 11 | 0,20 | 4,9 | 90 | B41821A4686M00* |
| | 100 | 5 × 11 | 16 | 0,20 | 3,3 | 160 | B41821A4107M00* |
| | 150 | 6,3 × 11 | 24 | 0,20 | 2,2 | 165 | B41821A4157M00* |
| | 220 | 6,3 × 11 | 35 | 0,20 | 1,5 | 260 | B41821F4227M00* |
| | 270 | 8 × 11 | 43 | 0,20 | 1,2 | 270 | B41821A4277M00* |
| | 330 | 8 × 11 | 53 | 0,20 | 1,0 | 350 | B41821A4337M00* |
| | 470 | 10 × 12,5 | 75 | 0,20 | 0,71 | 500 | B41821A4477M00* |
| | 560 | 10 × 12,5 | 90 | 0,20 | 0,59 | 450 | B41821A4567M00* |
| | 680 | 10 × 16 | 109 | 0,20 | 0,49 | 540 | B41821A4687M00* |
| | 1 000 | 10 × 16 | 160 | 0,20 | 0,33 | 790 | B41821A4108M00* |
| | 1 500 | 12,5 × 25 | 240 | 0,20 | 0,22 | 970 | B41821A4158M00* |
| | 2 200 | 12,5 × 25 | 352 | 0,22 | 0,17 | 1 350 | B41821A4228M00* |
| | 3 300 | 16 × 25 | 528 | 0,24 | 0,12 | 1 580 | B41821A4338M00* |
| | 4 700 | 16 × 25 | 752 | 0,26 | 0,09 | 2 100 | B41821A4478M00* ²⁾ |
| | 6 800 | 18 × 31,5 | 1 088 | 0,30 | 0,07 | 2 250 | B41821A4688M00* ²⁾ |
| | 8 200 | 20 × 30 | 1 312 | 0,34 | 0,07 | 2 500 | B41821A4828M00* ²⁾ |
| | 10 000 | 20 × 35 | 1 600 | 0,38 | 0,06 | 2 600 | B41821A4109M00* ²⁾ |
| 25 | 47 | 5 × 11 | 12 | 0,16 | 5,6 | 115 | B41821A5476M00* |
| | 68 | 6,3 × 11 | 17 | 0,16 | 3,9 | 125 | B41821A5686M00* |
| | 100 | 6,3 × 11 | 25 | 0,16 | 2,7 | 190 | B41821A5107M00* |
| | 150 | 8 × 11 | 38 | 0,16 | 1,8 | 200 | B41821A5157M00* |
| | 220 | 8 × 11 | 55 | 0,16 | 1,2 | 330 | B41821A5227M00* |
| | 270 | 10 × 12,5 | 68 | 0,16 | 1,0 | 350 | B41821A5277M00* |
| | 330 | 10 × 12,5 | 83 | 0,16 | 0,80 | 400 | B41821A5337M00* |
| | 470 | 10 × 12,5 | 118 | 0,16 | 0,56 | 550 | B41821B5477M00* |
| | 560 | 10 × 16 | 140 | 0,16 | 0,47 | 590 | B41821A5567M00* |
| | 680 | 10 × 20 | 170 | 0,16 | 0,39 | 660 | B41821A5687M00* |
| | 1 000 | 10 × 20 | 250 | 0,16 | 0,27 | 960 | B41821A5108M00* |
| | 1 500 | 12,5 × 25 | 375 | 0,16 | 0,18 | 1 100 | B41821A5158M00* |

Preferred types

1) * = "0" for bulk version.

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

2) Type available upon request


B41821 / B43821
Standard Series – 85 °C
Technical data and ordering codes

| U_R | C_R | Case dimensions | $I_{L, \max}$ | $\tan \delta_{\max}$ | ESR_{\max} | I_{-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 85 °C mA | |
| 25 | 2 200 | 12,5 × 25 | 550 | 0,18 | 0,14 | 1 550 | B41821F5228M00* |
| | 2 200 | 16 × 20 | 550 | 0,18 | 0,14 | 1 600 | B41821A5228M00* |
| | 3 300 | 16 × 25 | 825 | 0,20 | 0,10 | 1 980 | B41821A5338M00* |
| | 4 700 | 16 × 31,5 | 1 175 | 0,22 | 0,08 | 2 450 | B41821A5478M00* |
| | 6 800 | 18 × 40 | 1 700 | 0,26 | 0,06 | 2 600 | B41821A5688M00* |
| | 8 200 | 22 × 35 | 2 050 | 0,30 | 0,06 | 2 700 | B41821A5828M00* |
| | 10 000 | 22 × 40 | 2 500 | 0,34 | 0,06 | 3 000 | B41821A5109M00* |
| 35 | 33 | 5 × 11 | 12 | 0,14 | 7,0 | 85 | B41821A7336M00* |
| | 47 | 5 × 11 | 16 | 0,14 | 4,9 | 130 | B41821A7476M00* |
| | 68 | 6,3 × 11 | 24 | 0,14 | 3,4 | 160 | B41821A7686M00* |
| | 100 | 6,3 × 11 | 35 | 0,14 | 2,3 | 180 | B41821F7107M00* |
| | 150 | 8 × 11 | 53 | 0,14 | 1,5 | 270 | B41821A7157M00* |
| | 220 | 10 × 12,5 | 77 | 0,14 | 1,1 | 390 | B41821A7227M00* |
| | 270 | 10 × 12,5 | 95 | 0,14 | 0,9 | 430 | B41821A7277M00* |
| | 330 | 10 × 12,5 | 116 | 0,14 | 0,70 | 450 | B41821A7337M00* |
| | 470 | 10 × 16 | 165 | 0,14 | 0,49 | 650 | B41821A7477M00* |
| | 560 | 10 × 20 | 196 | 0,14 | 0,41 | 770 | B41821A7567M00* |
| | 680 | 10 × 20 | 238 | 0,14 | 0,34 | 840 | B41821A7687M00* |
| | 1 000 | 12,5 × 25 | 350 | 0,14 | 0,23 | 1 250 | B41821A7108M00* |
| | 1 500 | 16 × 25 | 525 | 0,14 | 0,15 | 1 400 | B41821A7158M00* |
| | 2 200 | 16 × 25 | 770 | 0,16 | 0,12 | 1 800 | B41821F7228M00* |
| | 3 300 | 18 × 31,5 | 1 155 | 0,18 | 0,09 | 2 150 | B41821A7338M00* |
| 4 700 | 18 × 40 | 1 645 | 0,20 | 0,07 | 2 300 | B41821A7478M00* | |
| 6 800 | 22 × 40 | 2 380 | 0,24 | 0,06 | 2 500 | B41821A7688M00* | |
| 50 | 10 | 5 × 11 | 5 | 0,12 | 20 | 60 | B41821A6106M00* |
| | 22 | 5 × 11 | 11 | 0,12 | 9,0 | 95 | B41821A6226M00* |
| | 33 | 6,3 × 11 | 17 | 0,12 | 6,0 | 110 | B41821A6336M00* |
| | 47 | 6,3 × 11 | 24 | 0,12 | 4,2 | 155 | B41821A6476M00* |
| | 68 | 8 × 11 | 34 | 0,12 | 2,9 | 190 | B41821A6686M00* |
| | 100 | 8 × 11 | 50 | 0,12 | 2,0 | 260 | B41821A6107M00* |
| | 150 | 10 × 12,5 | 75 | 0,12 | 1,3 | 320 | B41821A6157M00* |

Preferred types

1) * = "0" for bulk version.

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


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 μF | $d \times l$ mm | 5 min 20 °C μA | 120 Hz 20 °C | 120 Hz 20 °C Ω | 120 Hz 85 °C mA | |
| 50 | 220 | 10 × 12,5 | 110 | 0,12 | 0,90 | 430 | B41821A6227M00* |
| | 270 | 10 × 16 | 135 | 0,12 | 0,74 | 480 | B41821A6277M00* |
| | 330 | 10 × 16 | 165 | 0,12 | 0,60 | 510 | B41821A6337M00* |
| | 470 | 10 × 20 | 235 | 0,12 | 0,42 | 700 | B41821A6477M00* |
| | 560 | 12,5 × 25 | 280 | 0,12 | 0,36 | 900 | B41821A6567M00* |
| | 680 | 12,5 × 25 | 340 | 0,12 | 0,29 | 1 030 | B41821A6687M00* |
| | 1 000 | 16 × 20 | 500 | 0,12 | 0,20 | 1 100 | B41821A6108M00* |
| | 1 500 | 16 × 31,5 | 750 | 0,12 | 0,13 | 1 540 | B41821A6158M00* |
| | 2 200 | 18 × 35 | 1 100 | 0,14 | 0,11 | 1 700 | B41821A6228M00* |
| | 3 300 | 18 × 40 | 1 650 | 0,16 | 0,08 | 1 900 | B41821A6338M00* |
| 4 700 | 22 × 40 | 2 350 | 0,18 | 0,06 | 2 200 | B41821A6478M00* | |
| 63 | 6,8 | 5 × 11 | 4,3 | 0,12 | 29 | 50 | B41821A8685M00* |
| | 10 | 5 × 11 | 6,3 | 0,12 | 20 | 60 | B41821A8106M00* |
| | 22 | 6,3 × 11 | 14 | 0,12 | 9,0 | 110 | B41821A8226M00* |
| | 33 | 6,3 × 11 | 21 | 0,12 | 6,0 | 130 | B41821A8336M00* |
| | 47 | 8 × 11 | 30 | 0,12 | 4,2 | 180 | B41821A8476M00* |
| | 68 | 10 × 12,5 | 43 | 0,12 | 2,9 | 230 | B41821A8686M00* |
| | 100 | 10 × 12,5 | 63 | 0,12 | 2,0 | 290 | B41821A8107M00* |
| | 150 | 10 × 16 | 95 | 0,12 | 1,3 | 360 | B41821A8157M00* |
| | 220 | 10 × 16 | 139 | 0,12 | 0,90 | 470 | B41821A8227M00* |
| | 270 | 10 × 20 | 170 | 0,12 | 0,74 | 500 | B41821A8277M00* |
| | 330 | 10 × 20 | 208 | 0,12 | 0,60 | 620 | B41821A8337M00* |
| | 470 | 12,5 × 25 | 296 | 0,12 | 0,42 | 900 | B41821A8477M00* |
| | 560 | 16 × 20 | 353 | 0,12 | 0,36 | 930 | B41821A8567M00* |
| | 680 | 16 × 25 | 428 | 0,12 | 0,29 | 1 100 | B41821A8687M00* |
| | 1 000 | 16 × 31,5 | 630 | 0,12 | 0,20 | 1 500 | B41821A8108M00* |
| 1 500 | 18 × 35 | 945 | 0,12 | 0,13 | 1 900 | B41821A8158M00* | |
| 2 200 | 18 × 40 | 1 386 | 0,14 | 0,11 | 2 100 | B41821F8228M00* | |

Preferred types

1) * = "0" for bulk version.

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


B41821 / B43821
Standard Series – 85 °C
Technical data and ordering codes

| U_R VDC | 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 | $I_{\sim R}$ 120 Hz 85 °C mA | Ordering code ¹⁾ |
|--------------|---|--|--|---|---|---------------------------------------|-----------------------------|
| 100 | 0,10 | 5 × 11 | 3,0 | 0,10 | 1 658 | 2,0 | B41821A9104M00* |
| | 0,22 | 5 × 11 | 3,0 | 0,10 | 754 | 4,0 | B41821A9224M00* |
| | 0,33 | 5 × 11 | 3,0 | 0,10 | 502 | 7,0 | B41821A9334M00* |
| | 0,47 | 5 × 11 | 3,0 | 0,10 | 353 | 10 | B41821A9474M00* |
| | 0,68 | 5 × 11 | 3,0 | 0,10 | 244 | 13 | B41821A9684M00* |
| | 1,0 | 5 × 11 | 3,0 | 0,10 | 166 | 21 | B41821A9105M00* |
| | 1,5 | 5 × 11 | 3,0 | 0,10 | 111 | 24 | B41821A9155M00* |
| | 2,2 | 5 × 11 | 3,0 | 0,10 | 75 | 30 | B41821A9225M00* |
| | 3,3 | 5 × 11 | 3,3 | 0,10 | 50 | 40 | B41821A9335M00* |
| | 4,7 | 5 × 11 | 4,7 | 0,10 | 35 | 45 | B41821A9475M00* |
| | 10 | 6,3 × 11 | 10 | 0,10 | 17 | 75 | B41821A9106M00* |
| | 22 | 8 × 11 | 22 | 0,10 | 7,5 | 130 | B41821A9226M00* |
| | 33 | 10 × 12,5 | 33 | 0,10 | 5,0 | 190 | B41821A9336M00* |
| | 47 | 10 × 12,5 | 47 | 0,10 | 3,5 | 230 | B41821B9476M00* |
| | 68 | 10 × 16 | 68 | 0,10 | 2,4 | 280 | B41821A9686M00* |
| | 100 | 10 × 20 | 100 | 0,10 | 1,7 | 350 | B41821A9107M00* |
| | 150 | 12,5 × 25 | 150 | 0,10 | 1,1 | 550 | B41821A9157M00* |
| | 220 | 12,5 × 25 | 220 | 0,10 | 0,75 | 620 | B41821A9227M00* |
| | 270 | 16 × 25 | 270 | 0,10 | 0,61 | 770 | B41821A9277M00* |
| 330 | 16 × 25 | 330 | 0,10 | 0,50 | 800 | B41821A9337M00* | |
| 470 | 16 × 31,5 | 470 | 0,10 | 0,35 | 900 | B41821A9477M00* | |
| 560 | 16 × 31,5 | 560 | 0,10 | 0,30 | 1 000 | B41821A9567M00* | |
| 680 | 20 × 30 | 680 | 0,10 | 0,24 | 1 100 | B41821A9687M00* | |
| 1 000 | 20 × 40 | 1 000 | 0,10 | 0,17 | 1 300 | B41821A9108M00* | |

Preferred types

1) * = "0" for bulk version.

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


Technical data and ordering codes

| U_R | C_R | Case dimensions | $I_{L, \max}$ 5 min | $\tan \delta_{\max}$ 120 Hz | ESR_{\max} 120 Hz | $I_{\sim R}$ 120 Hz | Ordering code ¹⁾ |
|-------|----------------------------|--------------------|------------------------|--------------------------------|------------------------|------------------------|-----------------------------|
| VDC | 120 Hz 20 °C μF | $d \times l$ mm | 20 °C μA | 20 °C | 20 °C Ω | 85 °C mA | |

B43821

| | | | | | | | |
|-----|-----------|-----------|------|------|-------|-----------------|-----------------|
| 160 | 0,47 | 6,3 × 11 | 17 | 0,20 | 705 | 14 | B43821A1474M00* |
| | 0,68 | 6,3 × 11 | 18 | 0,20 | 488 | 16 | B43821A1684M00* |
| | 1,0 | 6,3 × 11 | 20 | 0,20 | 332 | 21 | B43821A1105M00* |
| | 1,5 | 6,3 × 11 | 22 | 0,20 | 221 | 30 | B43821A1155M00* |
| | 2,2 | 6,3 × 11 | 26 | 0,20 | 151 | 40 | B43821A1225M00* |
| | 3,3 | 6,3 × 11 | 31 | 0,20 | 100 | 45 | B43821A1335M00* |
| | 4,7 | 6,3 × 11 | 38 | 0,20 | 71 | 50 | B43821F1475M00* |
| | 6,8 | 8 × 11 | 48 | 0,20 | 49 | 62 | B43821A1685M00* |
| | 10 | 8 × 11 | 63 | 0,20 | 33 | 80 | B43821F1106M00* |
| | 22 | 10 × 16 | 121 | 0,20 | 15 | 130 | B43821A1226M00* |
| | 33 | 10 × 20 | 173 | 0,20 | 10 | 175 | B43821A1336M00* |
| | 47 | 12,5 × 25 | 241 | 0,20 | 7,1 | 285 | B43821A1476M00* |
| | 68 | 12,5 × 25 | 341 | 0,20 | 4,9 | 330 | B43821F1686M00* |
| | 68 | 16 × 20 | 341 | 0,20 | 4,9 | 330 | B43821A1686M00* |
| 100 | 16 × 25 | 495 | 0,20 | 3,3 | 410 | B43821A1107M00* | |
| 150 | 16 × 31,5 | 735 | 0,20 | 2,2 | 520 | B43821A1157M00* | |
| 220 | 18 × 31,5 | 1 071 | 0,20 | 1,5 | 660 | B43821A1227M00* | |
| 270 | 18 × 40 | 1 311 | 0,20 | 1,2 | 700 | B43821A1277M00* | |
| 330 | 20 × 30 | 1 599 | 0,20 | 1,0 | 750 | B43821A1337M00* | |
| 470 | 22 × 35 | 2 271 | 0,20 | 0,71 | 1 000 | B43821A1477M00* | |
| 560 | 22 × 40 | 2 703 | 0,20 | 0,59 | 1 100 | B43821A1567M00* | |
| 200 | 0,47 | 6,3 × 11 | 18 | 0,20 | 705 | 14 | B43821A2474M00* |
| | 0,68 | 6,3 × 11 | 19 | 0,20 | 488 | 16 | B43821A2684M00* |
| | 1,0 | 6,3 × 11 | 21 | 0,20 | 332 | 21 | B43821A2105M00* |
| | 1,5 | 6,3 × 11 | 24 | 0,20 | 221 | 30 | B43821A2155M00* |
| | 2,2 | 6,3 × 11 | 28 | 0,20 | 151 | 40 | B43821A2225M00* |
| | 3,3 | 6,3 × 11 | 35 | 0,20 | 100 | 45 | B43821A2335M00* |
| | 4,7 | 8 × 11 | 43 | 0,20 | 71 | 55 | B43821A2475M00* |
| | 6,8 | 10 × 12,5 | 56 | 0,20 | 49 | 78 | B43821A2685M00* |
| | 10 | 10 × 12,5 | 75 | 0,20 | 33 | 80 | B43821B2106M00* |

Preferred types

1) * = "0" for bulk version.

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


B41821 / B43821
Standard Series – 85 °C
Technical data and ordering codes

| U_R VDC | 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 | $I_{\sim R}$ 120 Hz 85 °C mA | Ordering code ¹⁾ |
|--------------|---|--|--|---|---|---------------------------------------|-----------------------------|
| 200 | 22 | 10 × 20 | 147 | 0,20 | 15 | 140 | B43821A2226M00* |
| | 33 | 10 × 20 | 213 | 0,20 | 10 | 155 | B43821B2336M00* |
| | 47 | 12,5 × 25 | 297 | 0,20 | 7,1 | 290 | B43821A2476M00* |
| | 68 | 16 × 20 | 423 | 0,20 | 4,9 | 330 | B43821A2686M00* |
| | 100 | 16 × 25 | 615 | 0,20 | 3,3 | 410 | B43821A2107M00* |
| | 150 | 18 × 31,5 | 915 | 0,20 | 2,2 | 540 | B43821A2157M00* |
| | 220 | 18 × 35 | 1 335 | 0,20 | 1,5 | 1 000 | B43821A2227M00* |
| | 270 | 20 × 35 | 1 635 | 0,20 | 1,2 | 1 100 | B43821A2277M00* |
| | 330 | 22 × 35 | 1 995 | 0,20 | 1,0 | 1 200 | B43821A2337M00* |
| 250 | 0,47 | 6,3 × 11 | 19 | 0,20 | 705 | 12 | B43821F2474M00* |
| | 0,68 | 6,3 × 11 | 20 | 0,20 | 488 | 17 | B43821F2684M00* |
| | 1,0 | 6,3 × 11 | 23 | 0,20 | 332 | 21 | B43821F2105M00* |
| | 1,5 | 6,3 × 11 | 26 | 0,20 | 221 | 30 | B43821F2155M00* |
| | 2,2 | 6,3 × 11 | 32 | 0,20 | 151 | 45 | B43821F2225M00* |
| | 3,3 | 8 × 11 | 40 | 0,20 | 100 | 50 | B43821F2335M00* |
| | 4,7 | 8 × 11 | 50 | 0,20 | 71 | 55 | B43821K2475M00* |
| | 6,8 | 10 × 12,5 | 66 | 0,20 | 49 | 78 | B43821F2685M00* |
| | 10 | 10 × 16 | 90 | 0,20 | 33 | 105 | B43821F2106M00* |
| | 22 | 10 × 20 | 180 | 0,20 | 15 | 145 | B43821F2226M00* |
| | 33 | 12,5 × 20 | 263 | 0,20 | 10 | 230 | B43821K2336M00* |
| | 33 | 12,5 × 25 | 263 | 0,20 | 10 | 250 | B43821F2336M00* |
| | 47 | 12,5 × 25 | 368 | 0,20 | 7,1 | 295 | B43821K2476M00* |
| | 47 | 16 × 20 | 368 | 0,20 | 7,1 | 300 | B43821F2476M00* |
| | 68 | 16 × 25 | 525 | 0,20 | 4,9 | 330 | B43821F2686M00* |
| | 100 | 16 × 31,5 | 765 | 0,20 | 3,3 | 520 | B43821K2107M00* |
| | 150 | 18 × 40 | 1 140 | 0,20 | 2,2 | 850 | B43821F2157M00* |
| | 220 | 18 × 40 | 1 665 | 0,20 | 1,5 | 1 000 | B43821F2227M00* |
| 270 | 22 × 35 | 2 040 | 0,20 | 1,2 | 1 100 | B43821F2277M00* | |
| 330 | 22 × 40 | 2 490 | 0,20 | 1,0 | 1 200 | B43821F2337M00* | |

Preferred types

1) * = "0" for bulk version.

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


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 μF | $d \times l$ mm | 5 min 20 °C μA | 120 Hz 20 °C | 120 Hz 20 °C Ω | 120 Hz 85 °C mA | |
| 350 | 0,47 | 6,3 × 11 | 20 | 0,20 | 705 | 12 | B43821A4474M00* |
| | 0,68 | 6,3 × 11 | 22 | 0,20 | 488 | 15 | B43821A4684M00* |
| | 1,0 | 6,3 × 11 | 26 | 0,20 | 332 | 21 | B43821A4105M00* |
| | 1,5 | 8 × 11 | 31 | 0,20 | 221 | 26 | B43821A4155M00* |
| | 2,2 | 8 × 11 | 38 | 0,20 | 151 | 30 | B43821A4225M00* |
| | 3,3 | 10 × 12,5 | 50 | 0,20 | 100 | 45 | B43821A4335M00* |
| | 4,7 | 10 × 12,5 | 64 | 0,20 | 71 | 55 | B43821A4475M00* |
| | 6,8 | 10 × 16 | 86 | 0,20 | 49 | 85 | B43821A4685M00* |
| | 10 | 10 × 20 | 120 | 0,20 | 33 | 95 | B43821A4106M00* |
| | 22 | 12,5 × 25 | 246 | 0,20 | 15 | 175 | B43821A4226M00* |
| | 33 | 16 × 25 | 362 | 0,20 | 10 | 240 | B43821A4336M00* |
| | 47 | 16 × 25 | 509 | 0,20 | 7,1 | 300 | B43821F4476M00* |
| | 68 | 18 × 31,5 | 729 | 0,20 | 4,9 | 420 | B43821A4686M00* |
| | 100 | 20 × 30 | 1 065 | 0,20 | 3,3 | 600 | B43821A4107M00* |
| | 150 | 20 × 40 | 1 590 | 0,20 | 2,2 | 700 | B43821A4157M00* |
| 400 | 2,2 | 10 × 12,5 | 41 | 0,20 | 151 | 40 | B43821A9225M00* |
| | 3,3 | 10 × 12,5 | 55 | 0,20 | 100 | 45 | B43821A9335M00* |
| | 4,7 | 10 × 16 | 71 | 0,20 | 71 | 60 | B43821A9475M00* |
| | 6,8 | 10 × 16 | 97 | 0,20 | 49 | 70 | B43821A9685M00* |
| | 10 | 10 × 20 | 135 | 0,20 | 33 | 95 | B43821A9106M00* |
| | 22 | 12,5 × 25 | 279 | 0,20 | 15 | 200 | B43821F9226M00* |
| | 22 | 16 × 20 | 279 | 0,20 | 15 | 180 | B43821A9226M00* |
| | 33 | 16 × 25 | 411 | 0,20 | 10 | 240 | B43821A9336M00* |
| | 47 | 16 × 31,5 | 579 | 0,20 | 7,1 | 310 | B43821A9476M00* |
| | 68 | 18 × 35 | 831 | 0,20 | 4,9 | 420 | B43821A9686M00* |
| | 100 | 20 × 35 | 1 215 | 0,20 | 3,3 | 600 | B43821A9107M00* |
| | 150 | 20 × 40 | 1 815 | 0,20 | 2,2 | 700 | B43821A9157M00* |

1) * = "0" for bulk version.

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

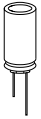

B41821 / B43821
Standard Series – 85 °C
Technical data and ordering codes

| 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 | $I_{\sim R}$ 120 Hz 85 °C mA | Ordering code ¹⁾ |
|------------|--------------------------------|--|---------------------------------------|---|--------------------------------------|---------------------------------------|-----------------------------|
| 450 VDC | 2,2 | 10 × 12,5 | 45 | 0,20 | 151 | 28 | B43821A5225M00* |
| | 3,3 | 10 × 16 | 60 | 0,20 | 100 | 44 | B43821A5335M00* |
| | 4,7 | 10 × 20 | 78 | 0,20 | 71 | 50 | B43821A5475M00* |
| | 6,8 | 10 × 20 | 107 | 0,20 | 49 | 75 | B43821A5685M00* |
| | 10 | 12,5 × 25 | 150 | 0,20 | 33 | 90 | B43821A5106M00* |
| | 22 | 16 × 25 | 312 | 0,20 | 15 | 165 | B43821A5226M00* |
| | 33 | 16 × 31,5 | 460 | 0,20 | 10 | 220 | B43821A5336M00* |
| | 47 | 18 × 31,5 | 650 | 0,20 | 7,1 | 265 | B43821A5476M00* |
| | 68 | 18 × 40 | 933 | 0,20 | 4,9 | 520 | B43821A5686M00* |
| | 100 | 20 × 40 | 1 365 | 0,20 | 3,3 | 600 | B43821A5107M00* |

Preferred types

1) * = "0" for bulk version.

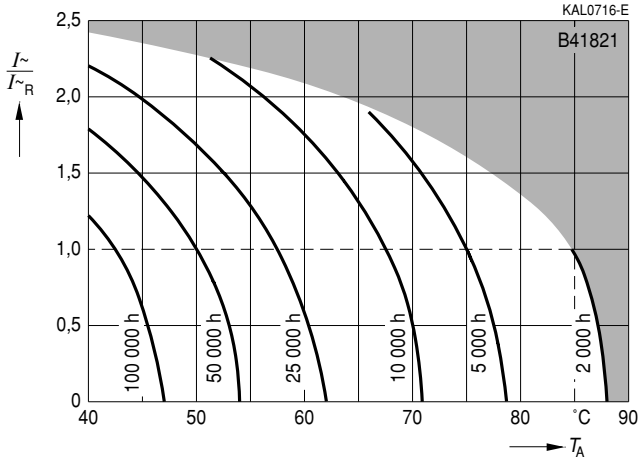
For taping versions, other lead configurations and packing information see page 503.



Useful life

depending on ambient temperature T_A under ripple current operating conditions¹⁾

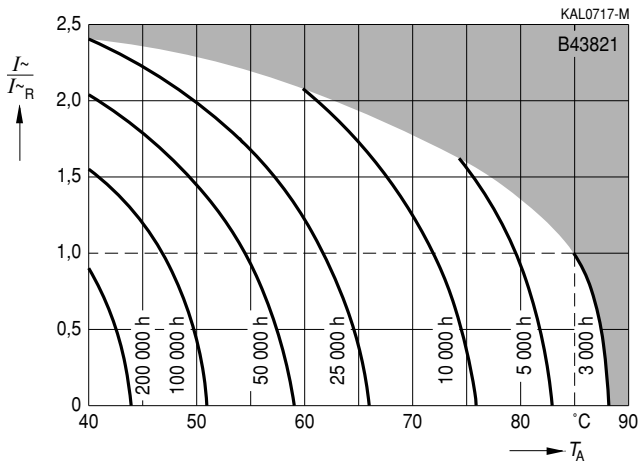
$U_R = 6,3 \dots 100$ VDC



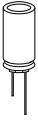
Useful life

depending on case temperature T_C under ripple current operating conditions¹⁾

$U_R = 160 \dots 450$ VDC



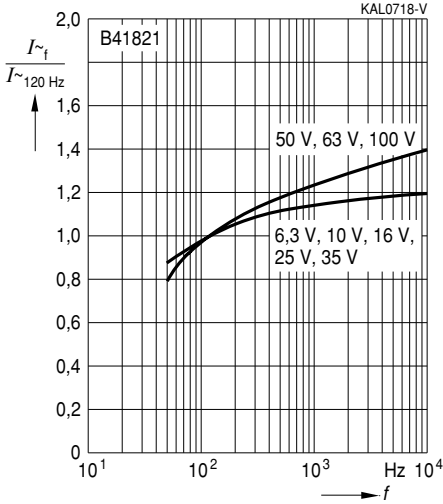
1) Refer to page 40 for an explanation on how to interpret the useful life graphs.



B41821 / B43821

Standard Series – 85 °C

Frequency factor of permissible ripple current I_{\sim} versus frequency f
 $U_R \leq 100$ VDC



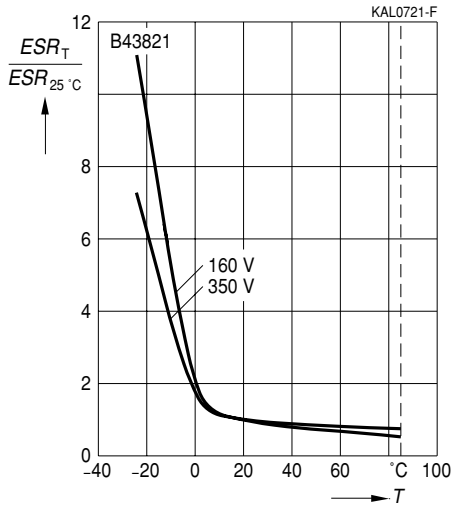
Frequency factor of permissible ripple current I_{\sim} versus frequency f
 $U_R \geq 160$ VDC



Equivalent series resistance ESR at $f = 120$ Hz versus temperature T
 Typical behavior
 $U_R \leq 100$ VDC

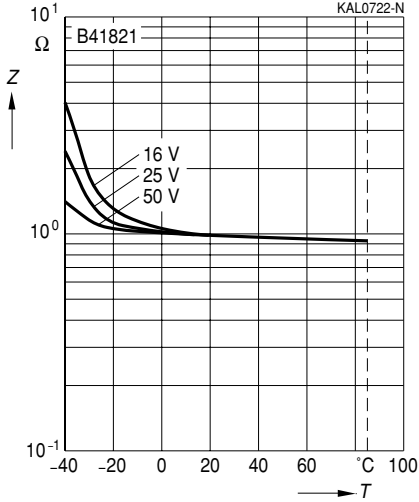


Equivalent series resistance ESR at $f = 120$ Hz versus temperature T
 Typical behavior
 $U_R \geq 160$ VDC

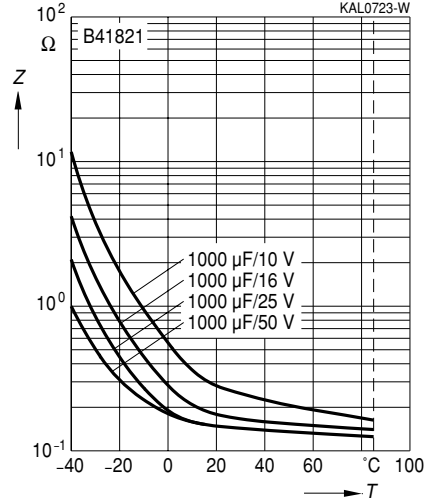




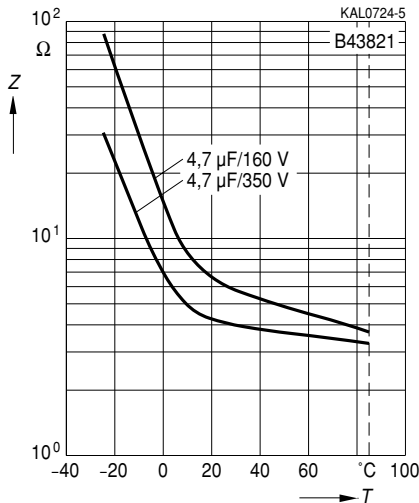
Impedance Z at $f = 120$ Hz
 versus temperature T
 Typical behavior
 $U_R \leq 100$ VDC



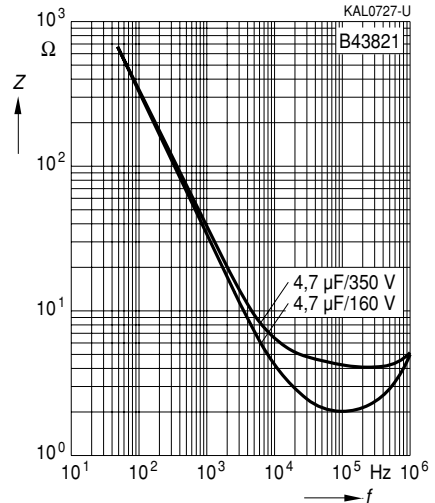
Impedance Z at $f = 10$ kHz
 versus temperature T
 Typical behavior
 $U_R \leq 100$ VDC



Impedance Z at $f = 10$ kHz
 versus temperature T
 Typical behavior
 $U_R \geq 160$ VDC



Impedance Z
 versus frequency f
 Typical behavior at 20 °C
 $U_R \geq 160$ VDC





B41821 / B43821

Standard Series – 85 °C

Impedance Z

versus frequency f and temperature T
for 4,7 $\mu\text{F}/160$ VDC
Typical behavior



Impedance Z

versus frequency f and temperature T
for 4,7 $\mu\text{F}/350$ VDC
Typical behavior



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