

**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**

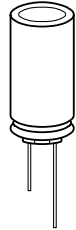
- Radial leads
- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Minus pole marking on insulating sleeve
- Case with safety vent
- Stand off rubber seal

**Delivery mode**

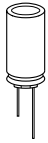
Special terminals configuration and packing:

- Bulk
- Taped, Ammo pack
- Cut
- Kinked

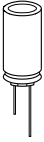
Refer to page 503 for further details and ordering example.



KAL0707-F


**Specifications and characteristics in brief**

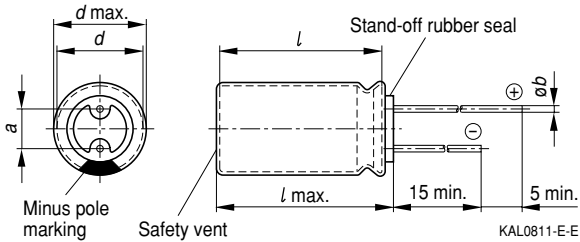
|   |  |  |
|---|--|--|
| Rated voltage $U_R$                         | 160 ... 350 VDC  |  |
| Surge voltage $U_S$                         | $1,1 \cdot U_R$  |  |
| Rated capacitance $C_R$                     | 3,3 ... 220 $\mu$ F  |  |
| Capacitance tolerance                       | $\pm 20 \% \triangleq M$   |  |
| Useful life<br>125 °C; $U_R$ ; $I_{\sim R}$ | > 2 000 h  | Requirements:<br>$\Delta C/C \leq \pm 35 \%$ of initial value<br>$\tan \delta \leq 3$ times initial specified limit<br>$I_L \leq$ initial specified limit<br>Failure percentage: $\leq 1 \%$<br>Failure rate: $\leq 100$ fit ( $\leq 100 \cdot 10^{-9}/h$ )<br>(for definition "fit", refer to chapter "Quality", page 62) |
| Voltage endurance test<br>125 °C; $U_R$     | 2 000 h  | Post test requirements:<br>$\Delta C/C \leq \pm 30 \%$ of initial value<br>$\tan \delta \leq 2$ times initial specified limit<br>$I_L \leq$ initial specified limit  |
| IEC climatic category                       | To IEC 60068-1:<br>$U_R \leq 250$ V:40/125/56 (– 40 °C/+ 125 °C/56 days damp heat test)<br>$U_R = 350$ 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:<br>displacement amplitude 0,75 mm, frequency range 10 ... 2000 Hz,<br>acceleration max. 10 g, duration 3 $\times$ 2 h             |  |



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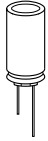
125 °C

### Dimensional drawing



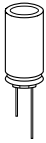
### Dimensions and weights

| 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**

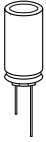
| $U_R$ (VDC)      | 160                               | 200       | 250       | 350       |
|------------------|-----------------------------------|-----------|-----------|-----------|
| $C_R$ ( $\mu$ F) | Case dimensions $d \times l$ (mm) |           |           |           |
| 3,3              |                                   |           |           | 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<br>$d \times l$<br>mm | $I_L$<br>5 min<br>20 °C<br>$\mu A$ | $\tan \delta_{max}$<br>120 Hz<br>20 °C | $ESR_{max}$<br>120 Hz<br>20 °C<br>$\Omega$ | $I_{\sim R}$<br>120 Hz<br>125 °C<br>mA | Ordering code <sup>1)</sup> |
|-------|-------|---------------------------------------|------------------------------------|--|--|--|-----------------------------|
| VDC   | 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                                    | B43866F2106M00*             |
|       | 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                                     | B43866A4335M00*             |
|       | 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*             |

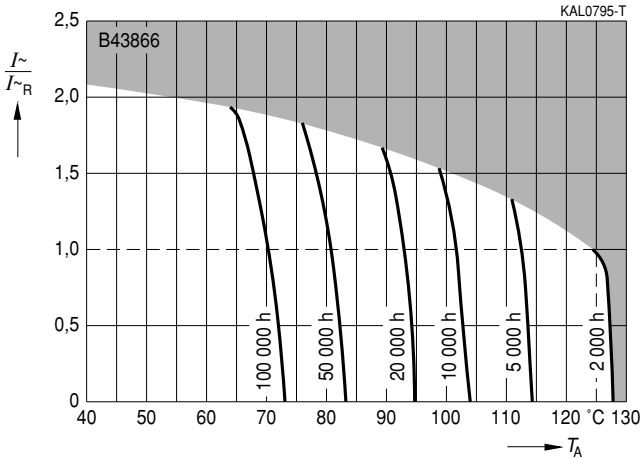
1) \* = "0" for bulk version. For taping versions, other lead configurations and packing information see page 503.



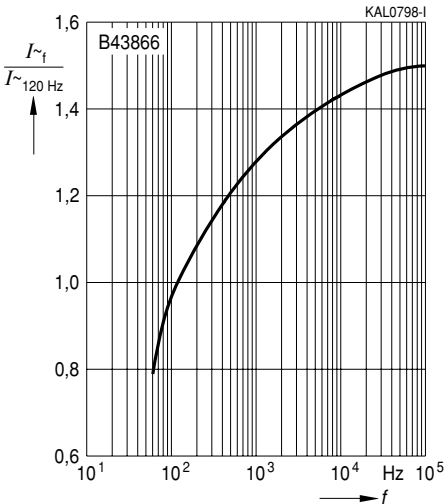
**Useful life**

depending on ambient temperature  $T_A$  under ripple current operating conditions<sup>1)</sup>

$U_R = 160 \dots 350$  VDC

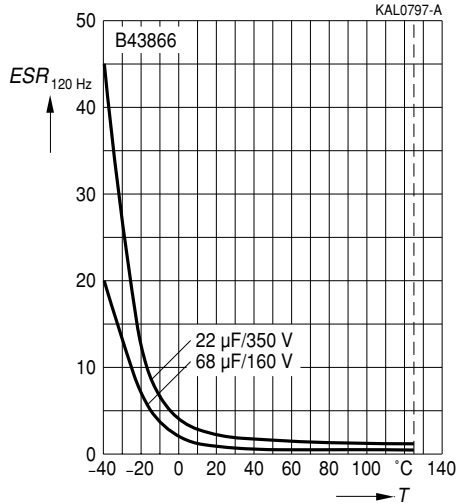


**Frequency factor of permissible ripple current  $I_{\sim}$  versus frequency  $f$**

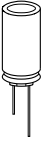


**Equivalent series resistance ESR**

versus temperature  $T$   
Typical behavior at 120 Hz



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



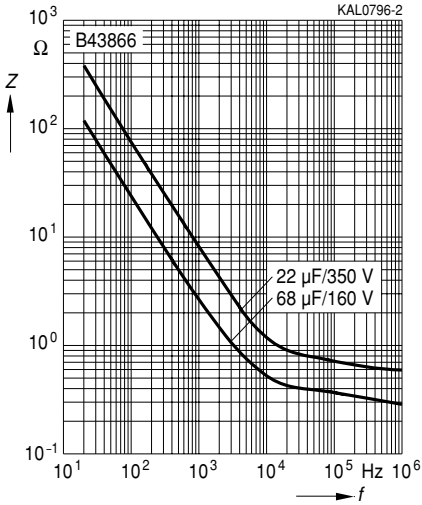
**B43866**

**125 °C**

**Impedance  $Z$**

versus frequency  $f$

Typical behavior at 20 °C



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