

Film Capacitors – AC Capacitors

Motor run capacitors

Series/Type: B32321/B32323 – MotorCap
Ordering code: B32321/B32323
Date: September 2016
Version: 2

© EPCOS AG 2016. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.

Film Capacitors – AC Capacitors

B32321/B32323

Motor run capacitors

B32321/B32323 – MotorCap

Construction

- Metallized polypropylene film
- Plastic can and top UL 94 V2 material minimum
- Dry type

Features

- Self-healing properties
- Low dissipation factor
- S0 safety class to IEC60252-1 (ed.2) am1:
- High insulation resistance
- IEC/EN 60335-1 compliance on request

Typical applications

- For general sine wave applications,
Mainly as motor run capacitor

Terminals

- B32321 – single fast-on: 6.3 x 0.8 mm
- B32323 – double fast-on: 6.3 x 0.8 mm

Mounting parts (optional)

- Threaded stud at bottom of can (M8, max. torque = 5 Nm)
- Locking clip for mounting into a hole of Ø 8 mm



Technical data and specifications

| | |
|--------------------------------------|--|
| Reference standards | EN60252-1: 2014-07 IEC60252-1: Ed 2,2013-8,amendment 1 |
| Safety class to IEC 60252-1/ 2013 | S0 |
| Life expectancy to IEC 60252-1 /2013 | 250 V/85 °C: 10000 h (class B) 400 V/85 °C: 10000 h (class B) |
| Rated capacitance C_R | See table ordering code |
| Tolerance T_x | ±5% |
| Rated voltage V_{rms} | 250 V AC, 400 V AC |
| Rated frequency f_R | 50/60 Hz |

Maximum ratings

| | |
|---------------------------------------|--|
| Maximum permissible voltage V_{max} | $1.1 \bullet V_R$ (V_R = Rated voltage) |
| Maximum permissible current I_{max} | $1.3 \bullet I_R$ (I_R = Rated current) |

Film Capacitors – AC Capacitors
B32321/B32323
Motor run capacitors
B32321/B32323 – MotorCap
Test data

| | |
|---|--|
| AC test voltage terminal to terminal V_{TT} | $2 \bullet V_R, 2 \text{ s (routine test)}$ $2 \bullet V_R, 60 \text{ s (type test)}$ |
| Insulation resistance R_{ins} or time constant τ at 20 °C, rel. humidity $\leq 65\%$ (minimum as-delivered values) | 3000 s |
| Dissipation factor $\tan \delta$ at 20 °C | $\leq 7.0 \bullet 10^{-3}$ (1 kHz) |
| Maximum rate of voltage rise dV/dt_{max} | 10 V/ μ s |

Climatic data

| | |
|---------------------------|--------------------------|
| Climatic category | 25/085/21 to IEC 60068-1 |
| Lower category T_{min} | -25 °C |
| Upper category T_{max} | +85 °C |
| Damp heat test t_{test} | 21 days |

Mechanical and thermal properties

| | |
|---|---|
| Ball pressure test to IEC 60309-1 sec. 27.3 | 20 N at 125 °C |
| Plastic can and top disk material | Compliant to IEC 60252-1 |
| Option A: | |
| <ul style="list-style-type: none"> ■ UL 94 V2 compatible ■ Glow wire test to IEC 60695-2-1/0 and -2-1/1 Test temp 550 °C for $I_R \leq 0.5 \text{ A}$ Test temp 850 °C for $I_R > 0.5 \text{ A}$ | Self-extinguishing within 30 seconds of withdrawing the glow wire and without igniting wrapping tissue. |
| Tracking test to IEC 60112 solution A | > 250 V |

Compatibility to RoHS

| | |
|------------------------------------|--|
| Compliance to directive 2002/95/EC |  |
|------------------------------------|--|

Approvals

| | |
|---|--|
| VDE, IEC 60252-1 | Approved 400 V/85 °C: 10000 h (class B) for 1.5 μ F to 50 μ F |
|  UL 810 files E183224 (Construction only) | Approved |
|  | Compliance to LV directive 2014/35/EU |

Display of ordering codes for EPCOS products

The ordering code for one and the same EPCOS product can be represented differently in data sheets, data books, other publications, on the EPCOS website, or in order-related documents such as shipping notes, order confirmations and product labels. **The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products.** Detailed information can be found on the Internet under www.epcos.com/orderingcodes

Film Capacitors – AC Capacitors

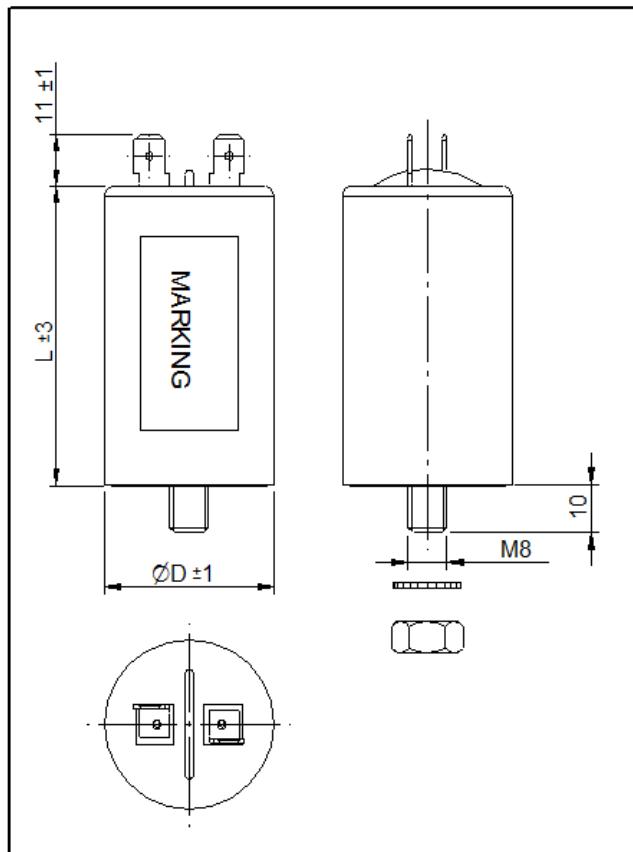
B32321/B32323

Motor run capacitors

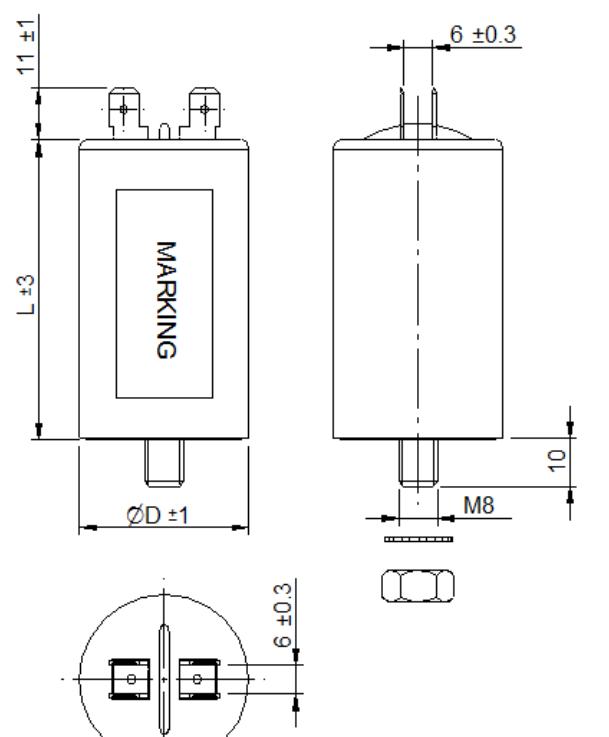
B32321/B32323 – MotorCap

Dimensional drawings

B32321

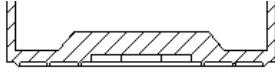


B32323

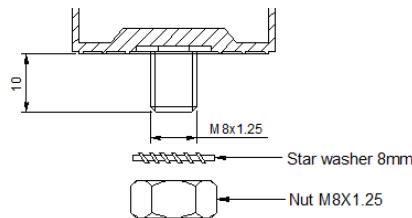


Mounting options

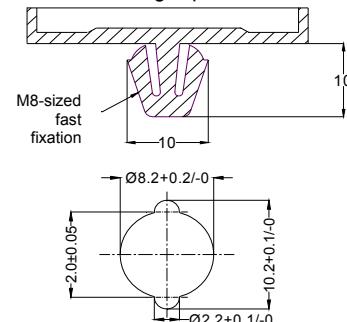
= 1: Can without mounting



= 3: Can with M8 bolt



= 5: Locking clip



Film Capacitors – AC Capacitors
B32321/B32323
Motor run capacitors
B32321/B32323 – MotorCap
Ordering codes and packing units

| Rated voltage V_R V AC | Rated capacitance C_R μF | Dimension D x L B32321 mm | Dimension D x L B32323 mm | Ordering code | Approvals | Packing unit pcs. |
|--------------------------------|---------------------------------------|---------------------------------|---------------------------------|-----------------|-----------|----------------------|
| 250 | 1.5 | 25 x 58 | 30 x 62 | B3232*C1155J0#0 | UL | 112 |
| | 2 | 25 x 58 | 30 x 62 | B3232*C1205J0#0 | UL | 112 |
| | 3 | 25 x 58 | 30 x 62 | B3232*C1305J0#0 | UL | 112 |
| | 4 | 25 x 58 | 30 x 62 | B3232*C1405J0#0 | UL | 112 |
| | 5 | 25 x 58 | 30 x 62 | B3232*C1505J0#0 | UL | 112 |
| | 6 | 25 x 58 | 30 x 62 | B3232*C1605J0#0 | UL | 112 |
| | 7 | 25 x 58 | 30 x 62 | B3232*C1705J0#0 | UL | 112 |
| | 7.5 | 25 x 58 | 30 x 62 | B3232*C1755J0#0 | UL | 112 |
| | 8 | 25 x 58 | 30 x 62 | B3232*C1805J0#0 | UL | 112 |
| | 9 | 30 x 62 | 30 x 62 | B3232*C1905J0#0 | UL | 112 |
| | 10 | 30 x 62 | 30 x 62 | B3232*C1106J0#0 | UL | 112 |
| | 12 | 30 x 62 | 30 x 62 | B3232*C1126J0#0 | UL | 112 |
| | 14 | 30 x 62 | 30 x 62 | B3232*C1146J0#0 | UL | 112 |
| | 15 | 30 x 62 | 30 x 62 | B3232*C1156J0#0 | UL | 112 |
| | 16 | 35 x 62 | 35 x 62 | B3232*C1166J0#0 | UL | 84 |
| | 18 | 35 x 62 | 35 x 62 | B3232*C1186J0#0 | UL | 84 |
| | 20 | 35 x 62 | 35 x 62 | B3232*C1206J0#0 | UL | 84 |
| | 22 | 35 x 62 | 35 x 62 | B3232*C1226J0#0 | UL | 84 |
| | 25 | 35 x 71 | 35 x 71 | B3232*C1256J0#0 | UL | 84 |
| | 30 | 35 x 71 | 35 x 71 | B3232*C1306J0#0 | UL | 84 |
| | 35 | 40 x 71 | 40 x 71 | B3232*C1356J0#0 | UL | 60 |
| | 40 | 40 x 71 | 40 x 71 | B3232*C1406J0#0 | UL | 60 |
| | 45 | 40 x 71 | 40 x 71 | B3232*C1456J0#0 | UL | 60 |
| | 50 | 40 x 96 | 40 x 96 | B3232*C1506J0#0 | UL | 60 |
| | 55 | 40 x 96 | 40 x 96 | B3232*C1556J0#0 | UL | 60 |
| | 60 | 40 x 96 | 40 x 96 | B3232*C1606J0#0 | UL | 60 |

Film Capacitors – AC Capacitors
B32321/B32323
Motor run capacitors
B32321/B32323 – MotorCap

| Rated voltage V _R V AC | Rated capacitance C _R μF | Dimension D × L B32321 mm | Dimension D × L B32323 mm | Ordering code | Approvals | Packing unit pcs. |
|---|---|------------------------------------|------------------------------------|-----------------|-----------|----------------------|
| 400 | 1.5 | 25 × 58 | 30 × 62 | B3232*B4155J0#0 | UL,VDE | 112 |
| | 2 | 25 × 58 | 30 × 62 | B3232*B4205J0#0 | UL,VDE | 112 |
| | 3 | 25 × 58 | 30 × 62 | B3232*B4305J0#0 | UL,VDE | 112 |
| | 4 | 25 × 58 | 30 × 62 | B3232*B4405J0#0 | UL,VDE | 112 |
| | 5 | 30 × 62 | 30 × 62 | B3232*B4505J0#0 | UL,VDE | 112 |
| | 6 | 30 × 62 | 30 × 62 | B3232*B4605J0#0 | UL,VDE | 112 |
| | 7 | 35 × 62 | 35 × 62 | B3232*B4705J0#0 | UL,VDE | 84 |
| | 8 | 35 × 62 | 35 × 62 | B3232*B4805J0#0 | UL,VDE | 84 |
| | 9 | 35 × 62 | 35 × 62 | B3232*B4905J0#0 | UL,VDE | 84 |
| | 10 | 35 × 62 | 35 × 62 | B3232*B4106J0#0 | UL,VDE | 84 |
| | 12 | 35 × 71 | 35 × 71 | B3232*B4126J0#0 | UL,VDE | 84 |
| | 14 | 35 × 71 | 35 × 71 | B3232*B4146J0#0 | UL,VDE | 84 |
| | 15 | 40 × 71 | 40 × 71 | B3232*B4156J0#0 | UL,VDE | 60 |
| | 16 | 40 × 71 | 40 × 71 | B3232*B4166J0#0 | UL,VDE | 60 |
| | 18 | 40 × 71 | 40 × 71 | B3232*B4186J0#0 | UL,VDE | 60 |
| | 20 | 40 × 71 | 40 × 71 | B3232*B4206J0#0 | UL,VDE | 60 |
| | 22 | 40 × 96 | 40 × 96 | B3232*B4226J0#0 | UL,VDE | 60 |
| | 25 | 40 × 96 | 40 × 96 | B3232*B4256J0#0 | UL,VDE | 60 |
| | 30 | 40 × 96 | 40 × 96 | B3232*B4306J0#0 | UL,VDE | 60 |
| | 35 | 45 × 96 | 45 × 96 | B3232*B4356J0#0 | UL,VDE | 45 |
| | 40 | 45 × 96 | 45 × 96 | B3232*B4406J0#0 | UL,VDE | 45 |
| | 45 | 50 × 96 | 50 × 96 | B3232*B4456J0#0 | UL,VDE | 32 |
| | 50 | 50 × 96 | 50 × 96 | B3232*B4506J0#0 | UL,VDE | 32 |
| | 55 | 50 × 96 | 50 × 96 | B3232*B4556J0#0 | UL | 32 |
| | 60 | 50 × 96 | 50 × 96 | B3232*B4606J0#0 | UL | 32 |

Film Capacitors – AC Capacitors

B32321/B32323

Motor run capacitors

B32321/B32323 – MotorCap

Composition of ordering code:

***: Terminals**

| | |
|---|--------------------------|
| 1 | single fast-on terminals |
| 3 | double fast-on terminals |

#: construction

| | |
|---|--|
| 1 | plastic can |
| 3 | plastic can with M8 bolt |
| 5 | plastic can with locking clip, available for diameters 30 mm, 32 mm and 35 mm, others on request |



Please read “Applications warning, installation and maintenance instructions” and the “ZVEI - General safety recommendations for power capacitors”, which are available on the Internet at www.epcos.com/ac_capacitors, to ensure optimum performance and to prevent products from failing, and in worst case, bursting and fire. Information given in the data sheet reflects typical specifications.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out that **such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order. We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, CeraDiode, CeraLink, CeraPlas, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PQSine, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, TFAP, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.