



# Film capacitors - AC capacitors

## Motor run capacitors

### **Series/Type: B32328**

The following products presented in this data sheet are being withdrawn.

| Ordering Code   | Substitute Product | Date of Withdrawal | Deadline Last Orders | Last Shipments |
|-----------------|--------------------|--------------------|----------------------|----------------|
| B32328A4256J037 |                    | 2013-02-08         | 2013-05-08           | 2013-08-08     |

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at [www.epcos.com/sales](http://www.epcos.com/sales).

### Construction

- Dielectric: polypropylene film
- Plastic can and top UL 94 V2 material
- Dry type

### Features

- Self-healing properties
- Low dissipation factor
- P0 as per IEC 60252-1 2001-02
- High insulation resistance
- Case IP 53 protected
- IEC/EN 60335-1 compatible on request

### Typical applications

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

### Terminals

- Twin core cable type PP 2 × 0.50 mm<sup>2</sup>, 600 V, 95 °C
- Connectors on request

### Mounting parts (optional)

- Threaded stud at bottom of can (max. torque = 5 Nm)
- Fast fixation for mounting into a hole of Ø 8 mm



| Technical data and specifications            |                                                                                                      |
|----------------------------------------------|------------------------------------------------------------------------------------------------------|
| Reference standards                          | IEC 60252-1 2001-02 / EN 60252 2001                                                                  |
| Safety class to IEC 60252-1 2001-02          | P0                                                                                                   |
| Life expectancy to IEC 60252 2001            | 250 V/85 °C: 10,000 h (class B)<br>400 V/85 °C: 10,000 h (class B)<br>480 V/85 °C: 3,000 h (class C) |
| Rated capacitance C <sub>R</sub>             | See dimensions table                                                                                 |
| Tolerance                                    | ±5%                                                                                                  |
| Rated voltage V <sub>R</sub>                 | 250 V, 400 V, 480 V                                                                                  |
| Rated frequency f <sub>R</sub>               | 50/60 Hz                                                                                             |
| Maximum ratings                              |                                                                                                      |
| Maximum permissible voltage V <sub>max</sub> | 1.1 × V <sub>R</sub> (V <sub>R</sub> = Rated voltage)                                                |
| Maximum permissible current I <sub>max</sub> | 1.3 × I <sub>R</sub> (I <sub>R</sub> = Rated current)                                                |

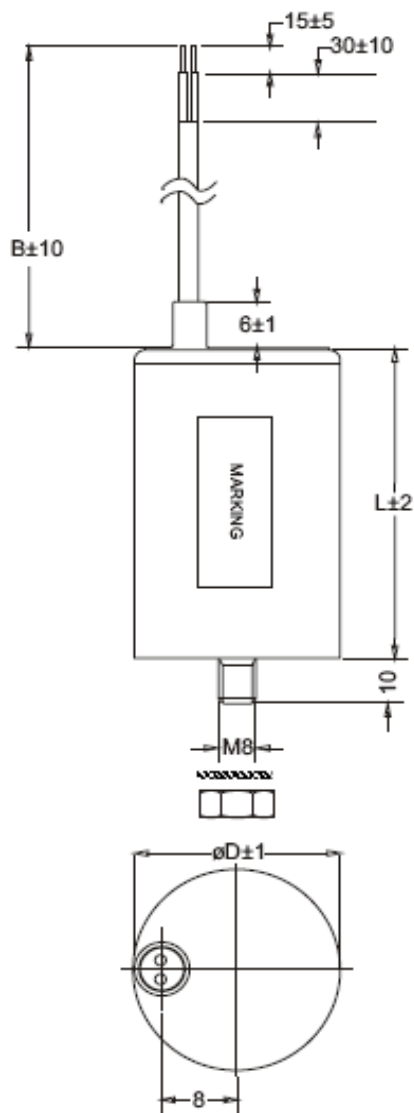
## Film capacitors – AC capacitors

### Motor Run Capacitors

**B32328 – MotorCap™**

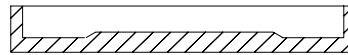
| Test data                                                                                                                                                                                                                                 |                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| AC test voltage terminal to terminal $V_{TT}$                                                                                                                                                                                             | $2 \cdot V_R$ , 2 s (routine test)<br>$2 \cdot V_R$ , 60 s (type test)                               |
| Insulation resistance $R_{ins}$ or time constant $\tau$ at 20 °C, rel. humidity $\leq 65\%$ (minimum as-delivered values)                                                                                                                 | 3,000 s                                                                                              |
| Dissipation factor $\tan \delta$ at 20 °C                                                                                                                                                                                                 | $\leq 1,0 \cdot 10^{-3}$ (120 Hz)                                                                    |
| Maximum rate of voltage rise $dV/dt_{max}$                                                                                                                                                                                                | 10 V/ $\mu$ 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 EN 60252                                                                                |
| <ul style="list-style-type: none"> <li>■ UL 94 V2 compatible</li> <li>■ Glow wire test to IEC 60695-2-1/0 and -2-1/1<br/>Test temp 550 °C for <math>I_R \leq 0.5</math> A<br/>Test temp 750 °C for <math>I_R &gt; 0.5</math> A</li> </ul> | Self extinguish within 30 seconds of withdrawing the glow wire and without igniting wrapping tissue. |
| Tracking test to IEC 60112 solution A                                                                                                                                                                                                     | > 250 V                                                                                              |
| Protection class to IEC 60529 2001                                                                                                                                                                                                        | IP 53                                                                                                |
| Compatibility to RoHS                                                                                                                                                                                                                     |                                                                                                      |
| Compliance to directive 2002/95/EC                                                                                                                                                                                                        |                  |
| Approvals                                                                                                                                                                                                                                 |                                                                                                      |
| <b>VDE</b><br>400 V/85 °C: 10,000 h (class B) for 1,5 $\mu$ F ... 50 $\mu$ F<br>480 V/85 °C: 3,000 h (class C) for 3 $\mu$ F ... 35 $\mu$ F                                                                                               | Approved<br>Approved                                                                                 |

### Dimensional drawing

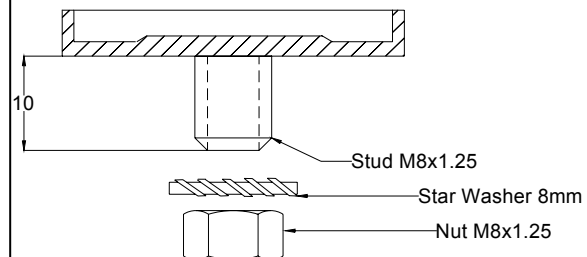


### Mounting options

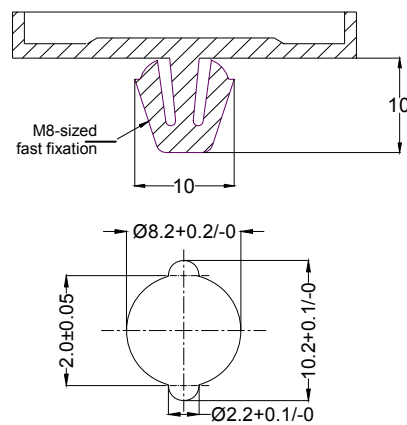
# = 1: Can without mounting



# = 2: Can with M8 bolt



# = 5: Fast fix mounting



**Ordering codes and packing units**

| V <sub>R</sub><br>V AC | C <sub>R</sub><br>μF | Max. dimensions<br>d × l<br>mm | Ordering code   | Packing units<br>pcs. |
|------------------------|----------------------|--------------------------------|-----------------|-----------------------|
| 250                    | 1,5                  | 25 × 58                        | B32328A1155J0#* | 112                   |
|                        | 2                    | 25 × 58                        | B32328A1205J0#* | 112                   |
|                        | 3                    | 25 × 58                        | B32328A1305J0#* | 112                   |
|                        | 4                    | 25 × 58                        | B32328A1405J0#* | 112                   |
|                        | 5                    | 25 × 58                        | B32328A1505J0#* | 112                   |
|                        | 6                    | 25 × 58                        | B32328A1605J0#* | 112                   |
|                        | 7                    | 25 × 58                        | B32328A1705J0#* | 112                   |
|                        | 7,5                  | 25 × 58                        | B32328A1755J0#* | 112                   |
|                        | 8                    | 25 × 58                        | B32328A1805J0#* | 112                   |
|                        | 9                    | 30 × 62                        | B32328A1905J0#* | 112                   |
|                        | 10                   | 30 × 62                        | B32328A1106J0#* | 112                   |
|                        | 12                   | 30 × 62                        | B32328A1126J0#* | 112                   |
|                        | 14                   | 30 × 62                        | B32328A1146J0#* | 112                   |
|                        | 15                   | 30 × 62                        | B32328A1156J0#* | 112                   |
|                        | 16                   | 30 × 62                        | B32328A1166J0#* | 112                   |
|                        | 18                   | 30 × 62                        | B32328A1186J0#* | 112                   |
|                        | 20                   | 35 × 62                        | B32328A1206J0#* | 84                    |
|                        | 22                   | 35 × 62                        | B32328A1226J0#* | 84                    |
|                        | 25                   | 35 × 71                        | B32328A1256J0#* | 84                    |
|                        | 30                   | 35 × 71                        | B32328A1306J0#* | 84                    |
|                        | 35                   | 40 × 71                        | B32328A1356J0#* | 60                    |
|                        | 40                   | 40 × 71                        | B32328A1406J0#* | 60                    |
|                        | 45                   | 40 × 71                        | B32328A1456J0#* | 60                    |
|                        | 50                   | 40 × 95                        | B32328A1506J0#* | 60                    |
|                        | 55                   | 40 × 95                        | B32328A1556J0#* | 60                    |
|                        | 60                   | 40 × 95                        | B32328A1606J0#* | 60                    |

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## Motor Run Capacitors

## B32328 – MotorCap™

| V <sub>R</sub><br>V AC | C <sub>R</sub><br>μF | Max. dimensions<br>d × l<br>mm | Ordering code   | Packing units<br>pcs. |
|------------------------|----------------------|--------------------------------|-----------------|-----------------------|
| 400                    | 1,5                  | 25 × 58                        | B32328A4155J0#* | 112                   |
|                        | 2                    | 25 × 58                        | B32328A4205J0#* | 112                   |
|                        | 3                    | 25 × 58                        | B32328A4305J0#* | 112                   |
|                        | 4                    | 25 × 58                        | B32328A4405J0#* | 112                   |
|                        | 5                    | 30 × 62                        | B32328A4505J0#* | 112                   |
|                        | 6                    | 30 × 62                        | B32328A4605J0#* | 112                   |
|                        | 7                    | 35 × 62                        | B32328A4705J0#* | 84                    |
|                        | 7,5                  | 35 × 62                        | B32328A4755J0#* | 84                    |
|                        | 8                    | 35 × 62                        | B32328A4805J0#* | 84                    |
|                        | 9                    | 35 × 62                        | B32328A4905J0#* | 84                    |
|                        | 10                   | 35 × 62                        | B32328A4106J0#* | 84                    |
|                        | 12                   | 35 × 71                        | B32328A4126J0#* | 84                    |
|                        | 14                   | 35 × 71                        | B32328A4146J0#* | 84                    |
|                        | 15                   | 40 × 71                        | B32328A4156J0#* | 60                    |
|                        | 16                   | 40 × 71                        | B32328A4166J0#* | 60                    |
|                        | 18                   | 40 × 71                        | B32328A4186J0#* | 60                    |
|                        | 20                   | 40 × 71                        | B32328A4206J0#* | 60                    |
|                        | 22                   | 40 × 71                        | B32328A4226J0#* | 60                    |
|                        | 25                   | 40 × 95                        | B32328A4256J0#* | 60                    |
|                        | 30                   | 40 × 95                        | B32328A4306J0#* | 60                    |
|                        | 35                   | 45 × 95                        | B32328A4356J0#* | 45                    |
|                        | 40                   | 45 × 95                        | B32328A4406J0#* | 45                    |
|                        | 45                   | 50 × 95                        | B32328A4456J0#* | 32                    |
|                        | 50                   | 50 × 95                        | B32328A4506J0#* | 32                    |
|                        | 55                   | 50 × 95                        | B32328A4556J0#* | 32                    |
|                        | 60                   | 50 × 95                        | B32328A4606J0#* | 32                    |

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| V <sub>R</sub><br>V AC | C <sub>R</sub><br>μF | Max. dimensions<br>d × l<br>mm | Ordering code   | Packing units<br>pcs. |
|------------------------|----------------------|--------------------------------|-----------------|-----------------------|
| 480                    | 3                    | 30 × 62                        | B32328A8305J0#* | 112                   |
|                        | 4                    | 30 × 62                        | B32328A8405J0#* | 112                   |
|                        | 6                    | 35 × 62                        | B32328A8605J0#* | 84                    |
|                        | 7,5                  | 35 × 62                        | B32328A8755J0#* | 84                    |
|                        | 8                    | 35 × 71                        | B32328A8805J0#* | 84                    |
|                        | 10                   | 40 × 71                        | B32328A8106J0#* | 60                    |
|                        | 12                   | 40 × 71                        | B32328A8126J0#* | 60                    |
|                        | 15                   | 45 × 71                        | B32328A8156J0#* | 45                    |
|                        | 16                   | 45 × 71                        | B32328A8166J0#* | 45                    |
|                        | 20                   | 45 × 71                        | B32328A8206J0#* | 45                    |
|                        | 22                   | 45 × 71                        | B32328A8226J0#* | 45                    |
|                        | 25                   | 45 × 95                        | B32328A8256J0#* | 45                    |
|                        | 30                   | 45 × 95                        | B32328A8306J0#* | 45                    |
|                        | 35                   | 45 × 95                        | B32328A8356J0#* | 32                    |
|                        | 40                   | 45 × 120                       | B32328A8406J0#* | 45                    |
|                        | 45                   | 50 × 120                       | B32328A8456J0#* | 32                    |
|                        | 50                   | 50 × 120                       | B32328A8506J0#* | 32                    |

### Composition of ordering code:

#### #: Construction

- 1 plastic can
- 3 plastic can with M8 bolt
- 5 plastic can with fast fixation device, available for diameters 30 mm, 32 mm and 35 mm, others on request

#### #: Wire length (dimension 'b' in drawing)

- 7 200 mm
- 9 300 mm
- others on request

**⚠** Please read "Applications warning, installation and maintenance instructions" and the "General Safety Data Sheet for Power Capacitors" issued by ZVEI, which are available on the internet at [www.epcos.com/ac\\_capacitors](http://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. You are kindly requested to approve our product specifications or request our approval for your specification before ordering.

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