Film capacitors – AC capacitors

Motor run capacitors

Series/Type: B32356 – MotorCap™ P2 Compact

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B32356B4405J022		2013-03-15	2013-06-15	2013-09-15

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.

Construction

- Dielectric: polypropylene film
- Electrode: segmented metallized film
- Dry type

Features

- Self-healing properties
- Low dissipation factor
- P2 safety class to IEC 60252-1 2001-02
- High insulation resistance
- Case IP 53 protected
- IEC/EN 60335-1 compatible

Typical applications

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

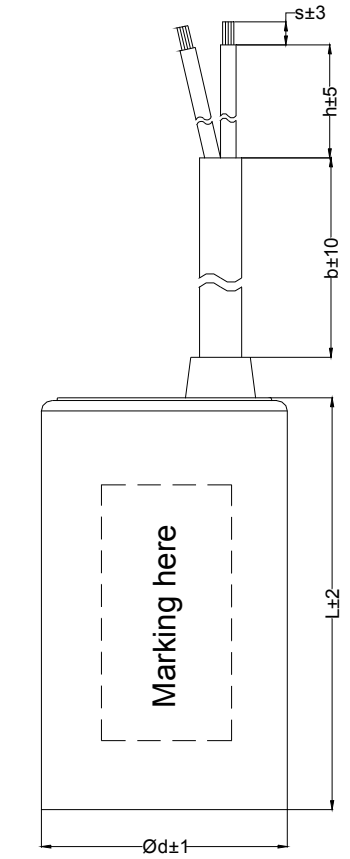
Terminals

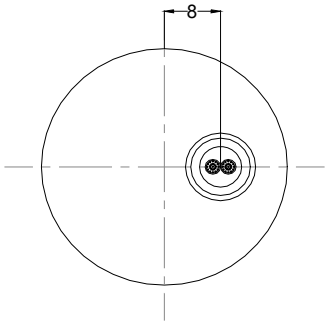
- Twin core cable, double insulated, 2 × 0.5 mm^2 minimum, +90 °C, (H05-V2-V2-F)
- Twin core cable UL style on request
- Receptacles on request

Technical data and specifications	
Reference standards	IEC 60252-1 2001-02 / EN 60252 2001
Safety class to IEC 60252-1 2001-02	P2
Life expectancy to IEC 60252 2001	400 V/85 °C: 30 000 h (class A) 450 V/85 °C: 10 000 h (class B)
Rated capacitance C_R	See dimensions table
Tolerance	±5%, other tolerances upon request
Rated voltage V_R	400, 450 V AC
Rated frequency f_R	50/60 Hz
Maximum ratings	
Maximum permissible voltage V_{max}	1.1 • V_R (V_R = rated voltage)
Maximum permissible current I_{max}	1.3 •· I_R (I_R = rated current)

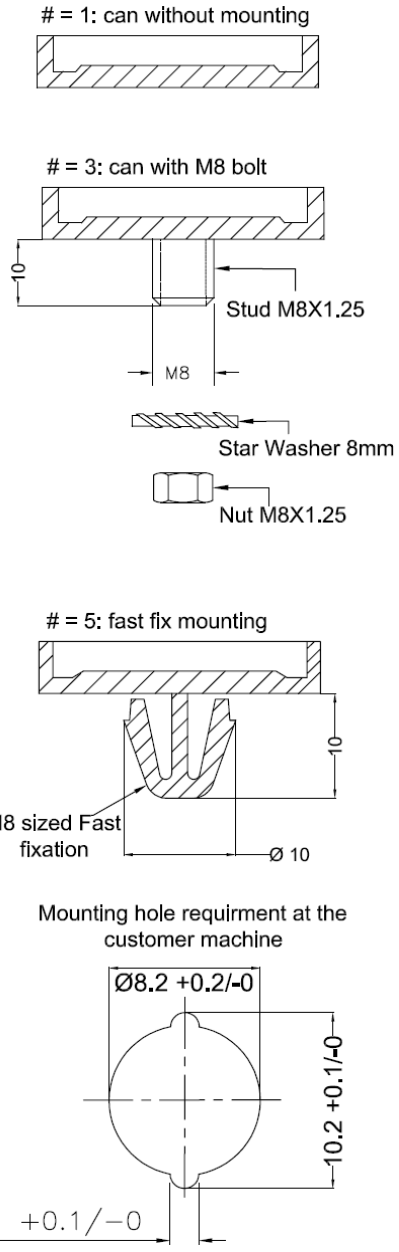
Test data	
AC test voltage terminal to terminal V_{TT}	2 • V_R, 2 s (routine test) 2 •· V_R, 60 s (type test)
AC Test voltage terminals to case V_{TC}	2 kV AC, 2 s (routine test) 2 kV AC, 60 s (type test)
Insulation resistance R_{ins} or time constant τ at 20 °C, rel. Humidity ≤ 65% (minimum as-delivered values)	3 000 s
Dissipation factor tan δ at 20 °C	≤ 1.0 • 10^{-3} (120 Hz)
Maximum rate of voltage rise dv/dt_{max}	10 V/µs
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 case and top disk material, filling material	Compliant to EN 60252/60335-1
■ UL 94 V2 compatible ■ Glow wire test to IEC 60695-2-1/0 and -2-1/1 Test temperature 550 °C for I_R ≤ 0.5 A Test temperature 750 °C for I_R > 0.5 A ■ Part is compatible to EN 60335-1	Self-extinguish within 2 seconds of withdrawing glow wire without igniting wrapping tissue to GWIT
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	RoHS compatible
Approvals	
VDE – 400 V/85 °C: 30 000 h (class A)	Approved
VDE – 450 V/85 °C: 10 000 h (class B)	Approved
c UL us UL 810 files E106388	Approved Component 10000 AFC up to 450 V

Dimensional drawing





Mounting options



Mounting options:

- Threaded stud at bottom of can (M8, max. torque = 5 Nm)
- Fast fixation for mounting into a hole of Ø 8 mm
- Mounting in any position possible

Ordering codes and packing units

V_R V AC	C_R µF	Dimensions d × L (mm)	Ordering code	Packing units pcs.
400 / 450	2	25 × 58	B32356B4205J0#&	112
	2.5	25 × 58	B32356B4255J0#&	112
	3	30 × 56*	B32356B4305J0#&	112
	3.15	30 × 56*	B32356B4315J5#0	112
	4	30 × 56*	B32356B4405J0#&	112
	5	30 × 56*	B32356B4505J0#&	112
	6	35 × 56*	B32356B4605J0#&	84
	6.3	35 × 56*	B32356B4635J0#&	84
	7	35 × 56*	B32356B4705J0#&	84
	7.5	35 × 56*	B32356B4755J0#&	84
	8	35 × 71	B32356B4805J0#&	84
	9	35 × 71	B32356B4905J0#&	84
	10	35 × 71	B32356B4106J0#&	84
	11	40 × 72	B32356B4116J0#&	60
	12	40 × 72	B32356B4126J0#&	60
	12.5	40 × 72	B32356B4126J5#0	60
	14	45 × 72	B32356B4146J0#&	45
	15	45 × 72	B32356B4156J0#&	45
	16	45 × 96	B32356B4166J0#&	45
	17.5	45 × 96	B32356B4176J5#0	45
	18	50 × 96	B32356B4186J0#&	32
	20	50 × 96	B32356B4206J0#&	32

* In case of construction with M8 bolt and locking clip height (dimension L) will be increased by 6 mm

Composition of ordering code:

#: 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

&: cable length (dimension 'b' in drawing)
2 200 mm
3 300 mm
other lengths on request

Cautions and warnings

⚠ 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**, 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.

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 we are 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 a 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.**
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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.

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