Film capacitors – AC capacitors

Motor run capacitors

250 V; class B; 85 °C / 400 V; class B; 85 °C / 480 V; class C; 85 °C

Series/Type: **B32320/B32322 – MotorCap™**

Date: January 2008
Version: 2.0

Construction

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

Features

- Self-healing properties
- Low dissipation factor
- P0 safety class to IEC 60252-1 2001-02
- High insulation resistance
- IEC/EN 60335-1 compatible on request

Typical applications

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

Terminals

- B32320 – single fast-on: 6.3 × 0.8 mm
- B32322 – double fast-on: 6.3 × 0.8 mm

Mounting parts (optional)

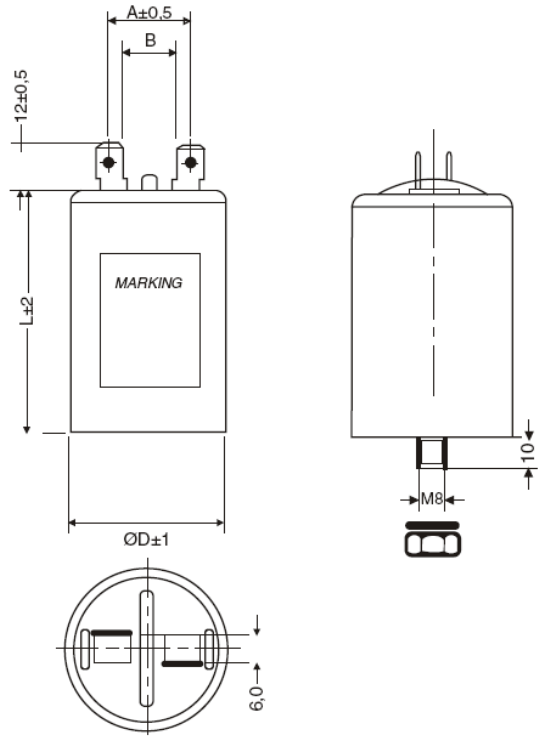
- Threaded stud at bottom of can (M8, max. torque = 5 Nm)
- Locking clip for mounting into a hole of Ø 8 mm

Technical data and specifications	
Reference standards	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: 10000 h (class B) 400 V/85 °C: 10000 h (class B) 480 V/85 °C: 3000 h (class C)
Rated capacitance C_R	1.5 ... 60 µF (250 V AC, 400 V AC) 3 ... 40 µF (480 V AC)
Tolerance	±5%
Rated voltage V_R	250 V AC, 400 V AC, 480 V AC
Rated frequency f_R	50 / 60 Hz
Maximum ratings	
Maximum permissible voltage V_{max}	$1.1 \cdot V_R$ (V_R= Rated voltage)
Maximum permissible current I_{max}	$1.3 \cdot I_R$ (I_R = Rated current)

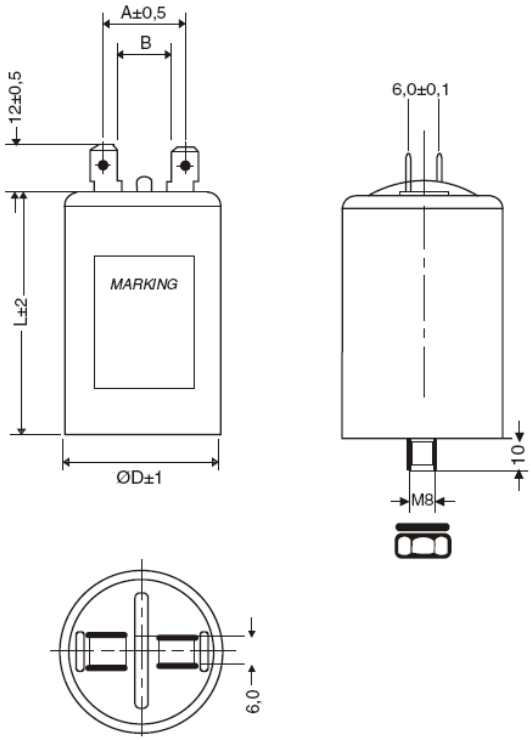
Test data	
AC test voltage terminal to terminal V_{TT}	$2 \cdot V_R$, 2 s (routine test) $2 \cdot V_R$, 60 s (type test)
Insulation resistance R_{ins} or time constant τ at 20 °C, rel. humidity ≤ 65% (minimum as-delivered values)	3000 s
Dissipation factor tan δ at 20 °C	$\leq 1.0 \cdot 10^{-3}$ (120 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 can and top disk material	Compliant to EN 60252
■ UL 94 V2 compatible ■ Glow wire test to IEC 60695-2-1/0 and –2-1/1 Test temp 550 °C for $I_R \leq 0.5$ A Test temp 750 °C for $I_R > 0.5$ 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	RoHS compatible
Approvals	
VDE	
400 V/85 °C: 10000 h (class B) for 1.5 µF ... 50 µF	Approved
480 V/85 °C: 3000 h (class C) for 3 µF ... 35 µF	Approved

Dimensional drawings

B32320

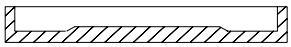


B32322

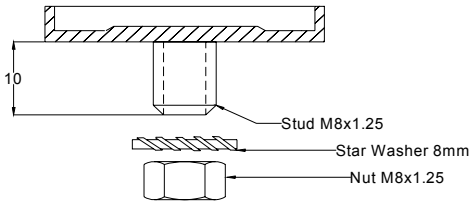


Mounting options

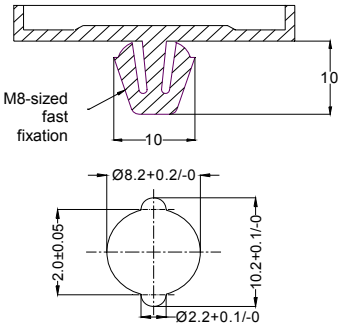
= 1: Can without mounting



= 3: Can with M8 bolt



= 5: Locking clip



Ordering codes and packing units

V_R V AC	C_R µF	Max. dimensions d × l (mm) B32320	Max. dimensions d × l (mm) B32322	Ordering code	Packing units pcs.
250	1.5	25 × 58	30 × 62	B3232*C1155J0#0	112
	2	25 × 58	30 × 62	B3232*C1205J0#0	112
	3	25 × 58	30 × 62	B3232*C1305J0#0	112
	4	25 × 58	30 × 62	B3232*C1405J0#0	112
	5	25 × 58	30 × 62	B3232*C1505J0#0	112
	6	25 × 58	30 × 62	B3232*C1605J0#0	112
	7	25 × 58	30 × 62	B3232*C1705J0#0	112
	7.5	25 × 58	30 × 62	B3232*C1755J0#0	112
	8	25 × 58	30 × 62	B3232*C1805J0#0	112
	9	30 × 62	30 × 62	B3232*C1905J0#0	112
	10	30 × 62	30 × 62	B3232*C1106J0#0	112
	12	30 × 62	30 × 62	B3232*C1126J0#0	112
	14	30 × 62	30 × 62	B3232*C1146J0#0	112
	15	30 × 62	30 × 62	B3232*C1156J0#0	112
	16	35 × 62	35 × 62	B3232*C1166J0#0	84
	18	35 × 62	35 × 62	B3232*C1186J0#0	84
	20	35 × 62	35 × 62	B3232*C1206J0#0	84
	22	35 × 62	35 × 62	B3232*C1226J0#0	84
	25	35 × 71	35 × 71	B3232*C1256J0#0	84
	30	35 × 71	35 × 71	B3232*C1306J0#0	84
	35	40 × 71	40 × 71	B3232*C1356J0#0	60
	40	40 × 71	40 × 71	B3232*C1406J0#0	45
	45	40 × 71	40 × 71	B3232*C1456J0#0	45
	50	40 × 95	40 × 95	B3232*C1506J0#0	45
	55	40 × 95	40 × 95	B3232*C1556J0#0	45
	60	40 × 95	40 × 95	B3232*C1606J0#0	45

V_R V AC	C_R µF	Max. dimensions d × l (mm) B32320	Max. dimensions d × l (mm) B32322	Ordering code	Packing units pcs.
400	1.5	25 × 58	30 × 62	B3232*B4155J0#0	112
	2	25 × 58	30 × 62	B3232*B4205J0#0	112
	3	25 × 58	30 × 62	B3232*B4305J0#0	112
	4	25 × 58	30 × 62	B3232*B4405J0#0	112
	5	30 × 62	30 × 62	B3232*B4505J0#0	112
	6	30 × 62	30 × 62	B3232*B4605J0#0	112
	7	35 × 62	35 × 62	B3232*B4705J0#0	84
	8	35 × 62	35 × 62	B3232*B4805J0#0	84
	9	35 × 62	35 × 62	B3232*B4905J0#0	84
	10	35 × 62	35 × 62	B3232*B4106J0#0	84
	12	35 × 71	35 × 71	B3232*B4126J0#0	84
	14	35 × 71	35 × 71	B3232*B4146J0#0	84
	15	40 × 71	40 × 71	B3232*B4156J0#0	60
	16	40 × 71	40 × 71	B3232*B4166J0#0	60
	18	40 × 71	40 × 71	B3232*B4186J0#0	60
	20	40 × 71	40 × 71	B3232*B4206J0#0	60
	22	40 × 95	40 × 95	B3232*B4226J0#0	60
	25	40 × 95	40 × 95	B3232*B4256J0#0	60
	30	40 × 95	40 × 95	B3232*B4306J0#0	60
	35	45 × 95	45 × 95	B3232*B4356J0#0	45
	40	45 × 95	45 × 95	B3232*B4406J0#0	45
	45	50 × 95	50 × 95	B3232*B4456J0#0	32
	50	50 × 95	50 × 95	B3232*B4506J0#0	32
	55	50 × 95	50 × 95	B3232*B4556J0#0	32
	60	50 × 95	50 × 95	B3232*B4606J0#0	32

V_R V AC	C_R µF	Max. dimensions d × l (mm) B32320	Max. dimensions d × l (mm) B32322	Ordering code	Packing units pcs.
480	3	30 × 62	30 × 62	B3232*B7305J0#0	112
	4	30 × 62	30 × 62	B3232*B7405J0#0	112
	5	30 × 62	30 × 62	B3232*B7505J0#0	112
	6	35 × 62	35 × 62	B3232*B7605J0#0	84
	7.5	35 × 71	35 × 71	B3232*B7755J0#0	84
	8	35 × 71	35 × 71	B3232*B7805J0#0	84
	10	40 × 71	40 × 71	B3232*B7106J0#0	60
	12	40 × 71	40 × 71	B3232*B7126J0#0	60
	15	45 × 71	45 × 71	B3232*B7156J0#0	45
	16	45 × 71	45 × 71	B3232*B7166J0#0	45
	20	45 × 71	45 × 71	B3232*B7206J0#0	45
	22	45 × 71	45 × 71	B3232*B7226J0#0	45
	25	45 × 95	45 × 95	B3232*B7256J0#0	45
	30	45 × 95	45 × 95	B3232*B7306J0#0	45
	35	50 × 95	50 × 95	B3232*B7356J0#0	32
	40	45 × 120	45 × 120	B3232*B7406J0#0	45

Composition of ordering code:

*: Terminals

- 0 single fast-on terminals
- 2 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

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