



## Film Capacitors – AC Capacitors

### Motor run capacitors

**Series/Type:** CBB65A-1  
**Ordering code:** B3333\*  
**Date:** July 2016  
**Version:** 1

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**Construction**

- Metallized polypropylene film
- Aluminum can and top
- Filling material: soft polyurethane resin

**Features**

- Self-healing properties
- Low dissipation factor
- Overpressure disconnection safety device
- S2 safety class as per IEC-60252-1(ed-2) am1
- High insulation resistance
- EN 60335-1 compliance

**Typical applications**

- For general sine wave application, mainly as motor run

**Terminals**






- 2+2 fast-on terminal 6.3 x 0.8mm #250 style, others on request

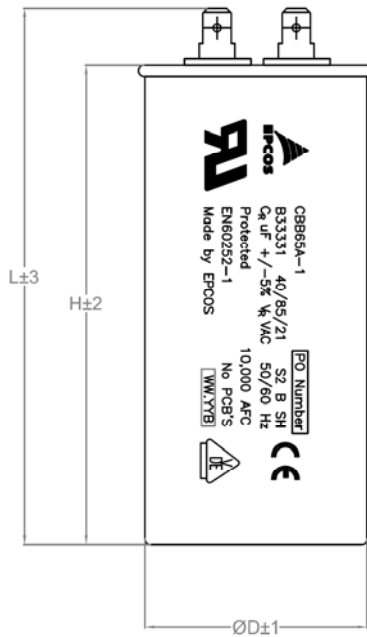
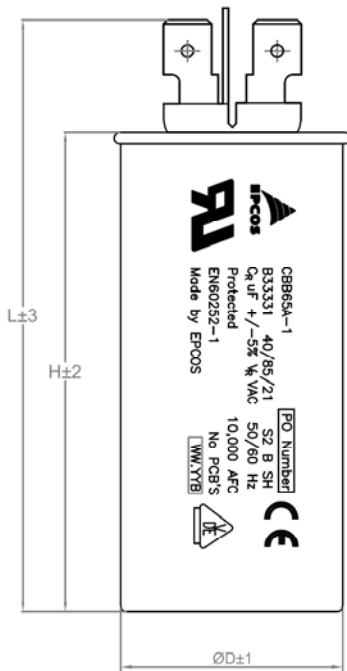
**Mounting Parts (Optional)**

- Threaded stud at bottom of can (M8, Max torque= 5 Nm for 50 mm diameter)

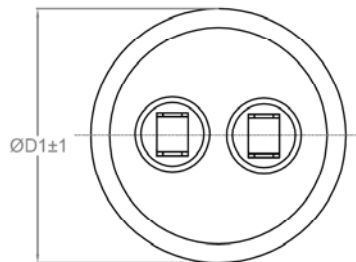
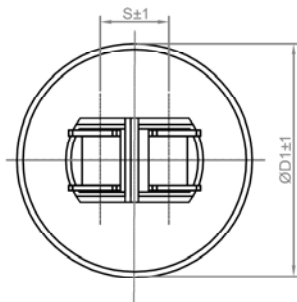


Technical data and specifications	
Reference standards	DIN EN 60252-1:2014-07, IEC 60252-1 (ed 2) am1 UL 810, GB/T3667.1
Safety class to IEC 60252-1 2013	S2
Life expectancy to IEC 60252-1 2013	450 V : 30000 h (Class A)
Rated capacitance $C_R$	See Table ordering code, page 5
Tolerance Tx	+/- 5%
Rated voltage $V_{rms}$	450 V , others on request
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)

<b>Test data</b>	
AC test voltage terminal to terminal $V_{TT}$	$2.0 \cdot V_R, 2 \text{ s}$
Insulation voltage terminals to case	3000 V AC, 2 s
Insulation resistance $R_{ins}$ or time constant at +20 °C, rel. Humidity $\leq 65\%$ (minimum as-delivered values)	10000 s
Dissipation factor $\tan \delta$ at +20 °C	$\leq 7 \cdot 10^{-3}$ (1 kHz)
Maximum rate of voltage rise $dV/dt_{max}$	10 V/ $\mu\text{s}$
<b>Climatic data</b>	
Climatic category	40/085/21 to IEC 60068-1
Lower category $T_{min}$	-40° C
Upper category $T_{max}$	+85° C
Damp heat test $t_{test}$	21 days
<b>Mechanical and thermal properties of terminal insulator material</b>	
Terminal material <ul style="list-style-type: none"> <li>■ UL 94 V0 compatible</li> <li>■ Glow wire test to IEC60335-1 Test temperature +750 °C</li> <li>■ Part is compatible to EN 60335-1</li> </ul>	Self-extinguishing within 2 seconds of withdrawing glow wire without igniting wrapping tissue of GWT
<b>Compatibility to RoHS</b>	
Compliance to directive 2011/65/EU	
<b>Approvals: See table for approved ratings</b>	
 US UL File E 238746	Approved component 10000 AFC
VDE EN 60252-1 	Approved up to 65 $\mu\text{F}$ , 450 V / 85°C : 30000 h (Class A)
CQC 	Approval on request
	Compliance to LV directive 2014/35/EU

**Dimensional drawing and marking**
**Drawing 1**
**Drawing 2**


Cr – Capacitance  
 Vr – Rated Voltage  
 CBB65A-1 – Product family  
 PO Number : Production Order Number  
 B33331 – Series  
 40/085/21 – Lower temperature limit : -40°C  
                   – Upper temperature limit : 85°C  
                   – Damp heat test : 21 days  
 S2: Safety class as per IEC60252-1  
 B: Life expectancy as per IEC60252-1  
 SH – Self Healing type MPP Capacitor  
 WW.YY.BB – WEEK CODE  
 WW-WEEK YY-YEAR (e.g. 48.14)  
 B – FOR BAWAL



**Ordering codes and packing unit**

$V_R$	$C_R$	Case dimensions (D × H) mm	D1 mm	L mm	Drawing No.	Ordering code	Packing unit	Approval
V AC	μF							
450	2	30 x 55	33	73	1	B3333*B6205-J0#X	100	VDE/UL
	4	35 x 55	38	68	2	B3333*B6405-J0#X	64	VDE/UL
	6	30 x 65	33	83	1	B3333*B6605-J0#X	100	VDE/UL
	8	35 x 65	38	78	2	B3333*B6805-J0#X	64	VDE/UL
	10	30 x 75	33	93	1	B3333*B6106-J0#X	100	VDE/UL
	12	40.5 x 65	43.5	78	2	B3333*B6126-J0#X	49	VDE/UL
	14	45 x 55	48	68	2	B3333*B6146-J0#X	49	VDE/UL
	16	40.5 x 75	43.5	88	2	B3333*B6166-J0#X	49	VDE/UL
	20	40.5 x 85	43.5	98	2	B3333*B6206-J0#X	49	VDE/UL
	25	40.5 x 100	43.5	113	2	B3333*B6256-J0#X	49	VDE/UL
	25	45 x 85	48	98	2	B3333*B6256-J0#X	49	VDE/UL
	30	50 x 85	53	98	2	B3333*B6306-J0#X	36	VDE/UL
	40	50 x 100	53	113	2	B3333*B6406-J0#X	36	VDE/UL
	50	50 x 100	53	113	2	B3333*B6506-J0#X	36	VDE/UL

**Composition of ordering code**

\*: Terminals:

B33331: 2+2 fast-on terminals

B3333x: Other terminal configuration on request

#:construction

6 Aluminium Can Flat type

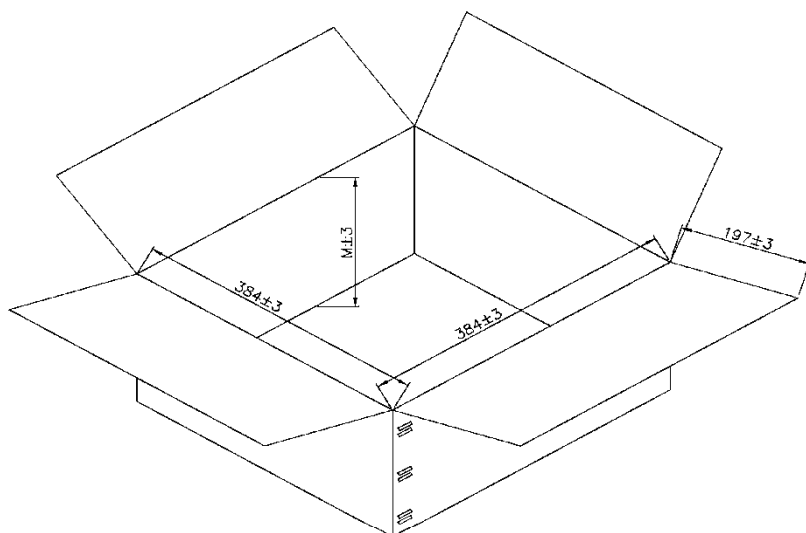
8 Aluminium Can with M8 bolt

X: 0 as per this dimension and properties

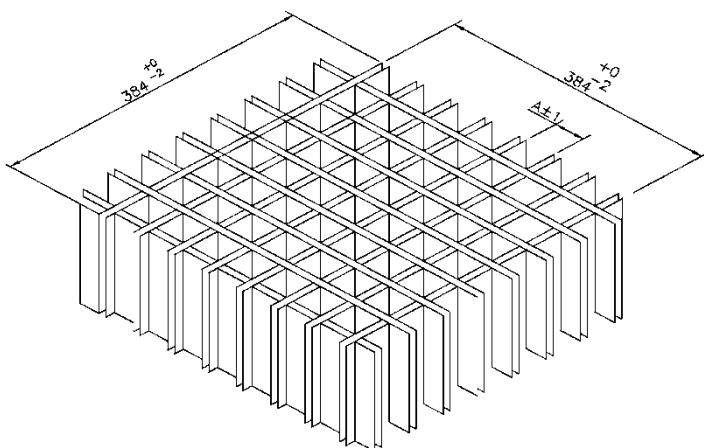
1-9 special dimension and properties

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**Packing box**


$$M = H(\text{Capacitor height}) + \text{Terminal height} + 10\text{mm min.}$$



**⚠** 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](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.

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