



## Film Capacitors – AC Capacitors

### Motor run capacitors

**Series/Type:** CBB65A-1  
**Ordering code:** B33335\*  
**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**

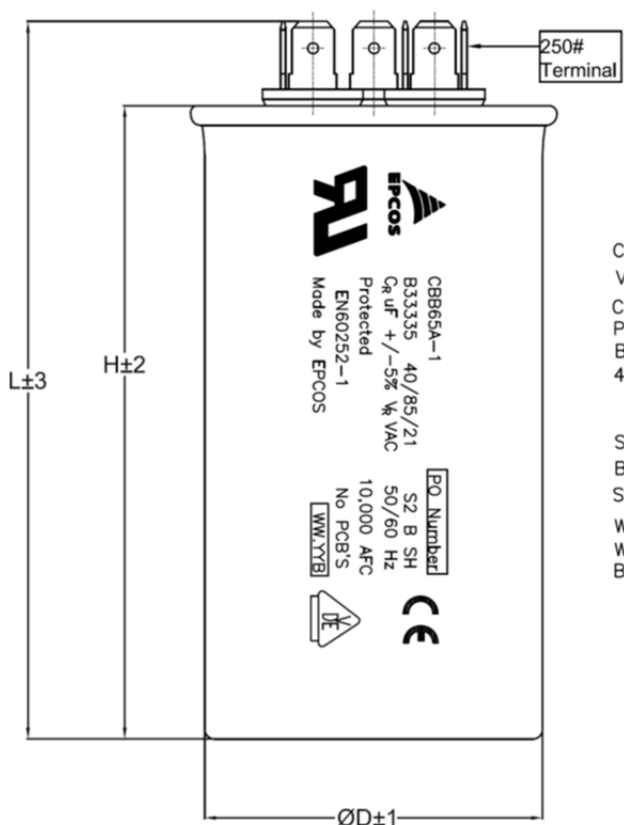
- 2+3+4 fast-on terminal 6.3 x 0.8mm (#250 style) others on request

**Mounting Parts (optional)**

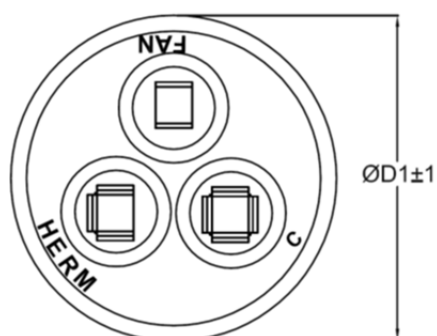
- Threaded stud at bottom of can (M8, Max torque= 5 Nm for 50 mm diameter)

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 $V_{TT}$	$2.0 \bullet V_{Rv}$ , 2 s
Insulation voltage terminals to case	3000 V AC, 2 s
Insulation resistance $R_{ins}$ or time constant +20 °C, rel. humidity $\leq 65\%$ (minimum as-delivered values)	10000 s
Dissipation factor $\tan \delta$ at +20 °C	$\leq 7 \bullet 10^{-3}$ (1 kHz)
Maximum rate of voltage rise $dV/dt_{max}$	10 V/ $\mu$ 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</li> <li>■ 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+15 uF, 450 V / 85 °C : 30000 h (Class A)
CQC 	Approval on request
	Compliance to LV directive 2014/35/EU

**Dimensional drawing and marking**


Cr – Capacitance  
 Vr – Rated Voltage  
 CBB65A-1 – Product family  
 PO Number : Production Order Number  
 B33335 – 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.YYB – WEEK CODE  
 WW-WEEK YY-YEAR (e.g. 42.15)  
 B- FOR BAWAL



**Ordering codes and packing unit**

$V_R$	$C_R$	Case dimensions (D x H) mm	D1 mm	L mm	Ordering code	Packing unit	Approval
V AC	$\mu F$						
450	12+1.5	50 x 57	53	70	B33335B6121J0#X	36	VDE/UL
	20+2	50 x 67	53	80	B33335B6027J0#X	36	VDE/UL
	30+2	50 x 77	53	90	B33335B6146J0#X	36	VDE/UL
	35+5	63.5 x 75	66.5	88	B33335B6040J0#X	25	VDE/UL
	35+8	50 x 87	53	100	B33335B6058J0#X	36	VDE/UL
	40+5	55 x 100	58	113	B33335B6042J0#X	36	VDE/UL
	45+2	50 x 102	53	115	B33335B6064J0#X	36	VDE/UL
	50+2	60 x 102	63	90	B33335B6129J0#X	25	VDE/UL
	50+3.5	60 x 102	63	115	B33335B6126J0#X	25	VDE/UL
	55+7.5	55 x 100	58	113	B33335B6149J0#X	36	VDE/UL
	60+3.5	60 x 102	63	115	B33335B6137J0#X	25	VDE/UL
	60+5	63.5 x 102	66.5	115	B33335B6130J0#X	25	VDE/UL
	60+7.5	63.5 x 102	66.5	115	B33335B6131J0#X	25	VDE/UL
60+8	63.5 x 102	66.5	115	B33335B6248J0#X	25	VDE/UL	

**Composition of ordering code**

# : Construction

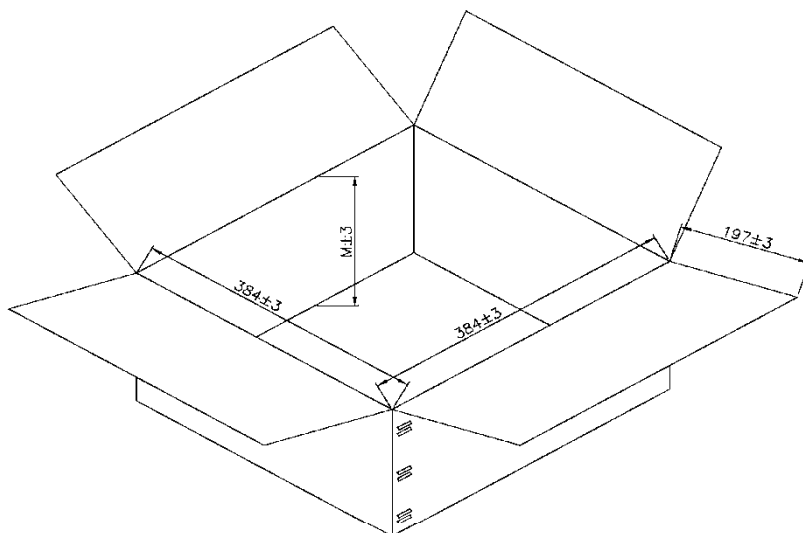
- 6 Aluminium can flat type, 2+3+4 Fast-on terminal
- 8 Aluminium can M8 Bolt, 2+3+4 Fast-on terminal

X: 0 as per this dimension and properties

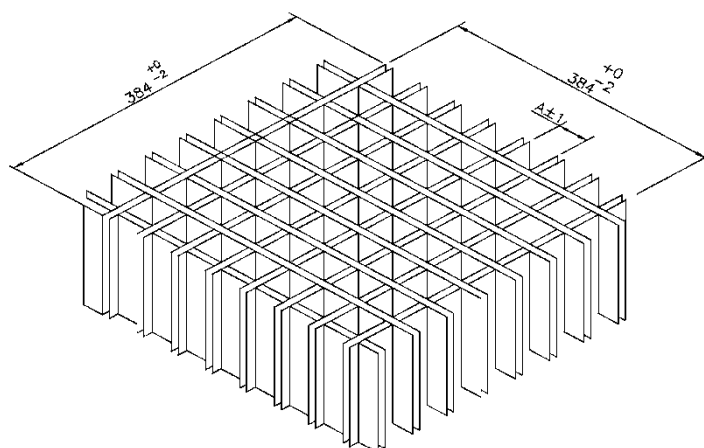
1-9 special dimension and properties

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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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