Film Capacitors – AC Capacitors

Motor run capacitors

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

Date: July 2016
Version: 1

EPCOS AG is a TDK Group Company.

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

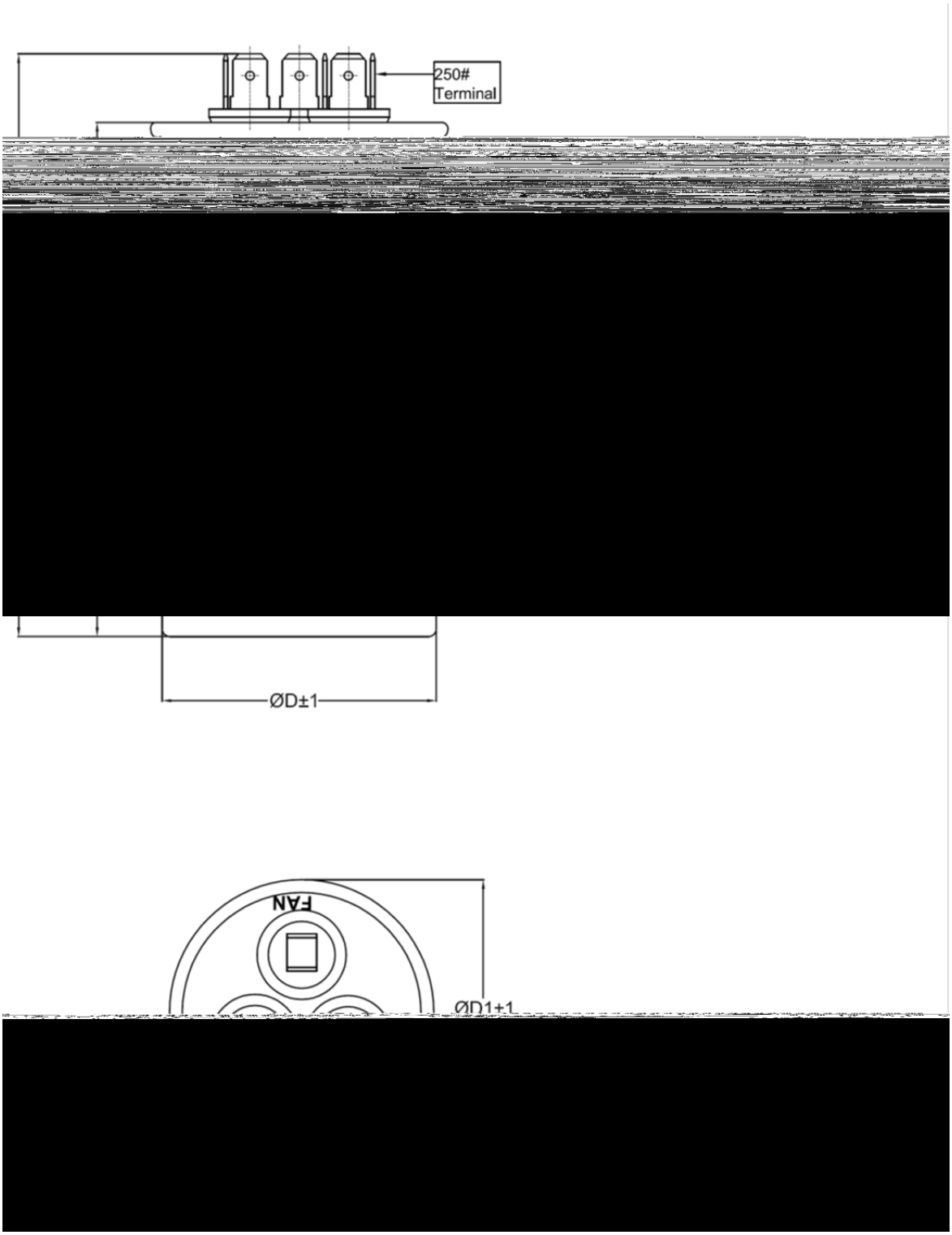
Mounting Parts (optional)

- 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}	$1.1 \bullet V_R$ (V_R = Rated voltage)
Maximum permissible current I_{max}	$1.3 \bullet I_R$ (I_R = Rated current)

Test data	
AC test voltage terminal to terminal V_{TT}	2.0 • V_R, 2 s
Insulation voltage terminals to case	3000 V AC, 2 s
Insulation resistance R_{ins} or time constant +20 ℃, rel. humidity ≤65% (minimum as-delivered values)	10000 s
Dissipation factor tan δ at +20 ℃	≤ 7 • 10^{-3} (1 kHz)
Maximum rate of voltage rise dV/dt_{max}	10 V/µs
Climatic data	
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
Mechanical and thermal properties of terminal insulator material	
Terminal material ■ UL 94 V0 compatible ■ Glow wire test to IEC60335-1 ■ Test temperature +750 °C ■ Part is compatible to EN 60335-1	Self-extinguishing within 2 seconds of withdrawing glow wire without igniting wrapping tissue of GWT
Compatibility to RoHS	
Compliance to directive 2011/65/EU	RoHS compatible
Approvals: See table for approved ratings	
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



Ordering codes and packing unit

V_R V AC	C_R µF	Case dimensions (D × H) mm	D1 mm	L mm	Ordering code	Packing unit	Approval
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	63.5x 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

Display of ordering codes for EPCOS products

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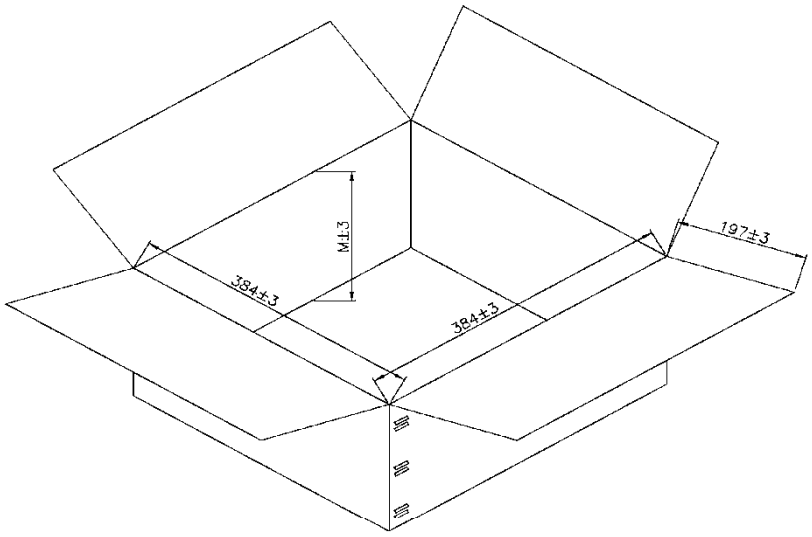
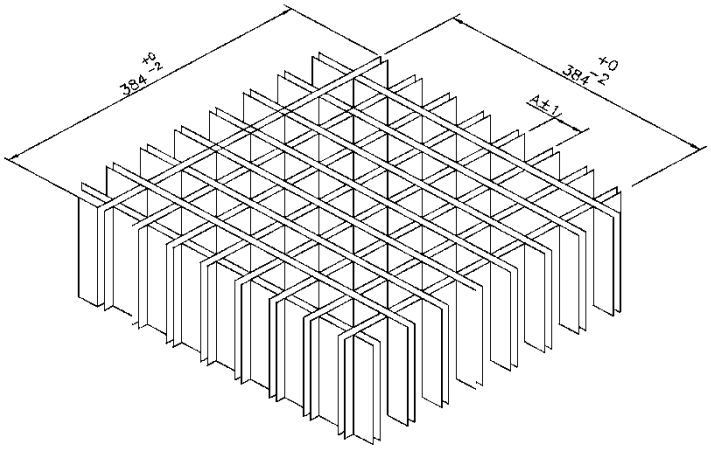
Packing box



M = H(Capacitor height) + Terminal height + 10mm 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**, 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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