



Film capacitors – AC capacitors

EPCOS Feida Motor Run Capacitors

Series/Type:	CBB66 - Single Capacitor P2 Aluminum Can Oval
Ordering code:	B33360 / 61/ 62 / 64
Date:	November 2009
Version:	1

Construction

- Dielectric: polypropylene film
- Electrode: Metallized film
- Aluminum can, metal top
- Filling material: Vegetable oil, PCB free
- Insulator material as per IEC 60335-1

Features

- Self-healing properties
- Low dissipation factor
- Overpressure disconnection device
- Highest safety level P2 to IEC 60252-1 2001-02
- High insulation resistance
- IEC/EN 60335 compatible



Typical applications

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

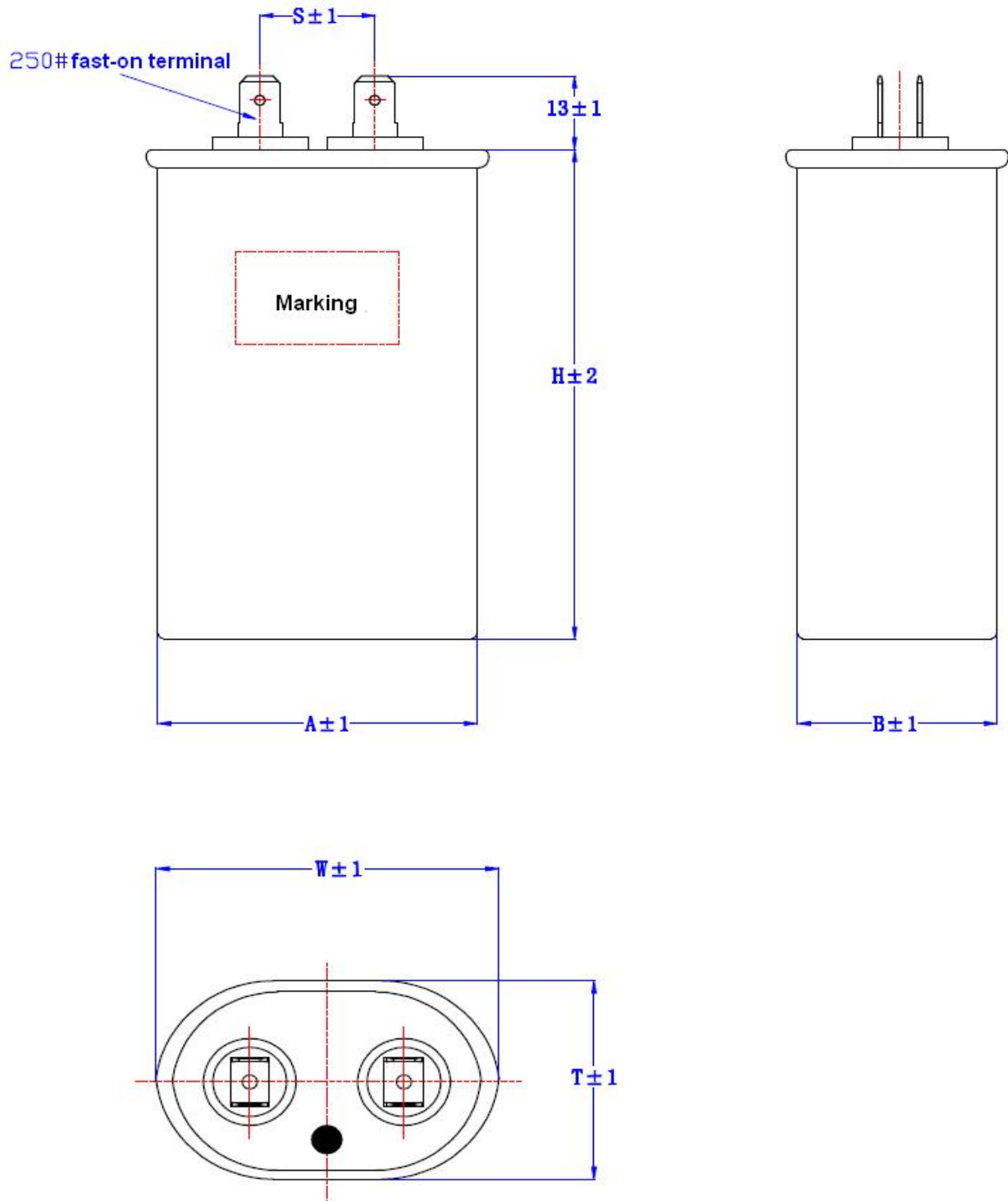
Terminals

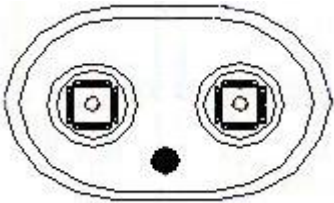
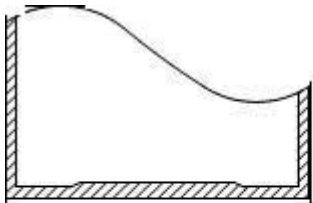
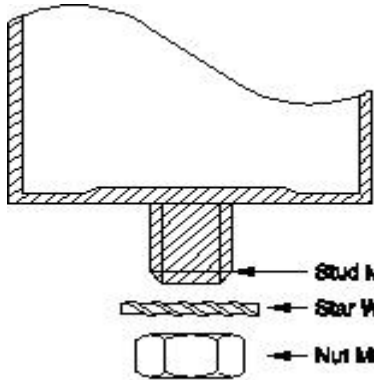
- 1+1, 2+2, 2+4, 4+4 fast-on terminal #250 style

Technical data and specifications	
Reference standards	UL 810 / IEC 60252-1 / EIA 456 A Jan.89
Safety class to IEC 60252-1 2001-02	P2
Life expectancy to IEC 60252 2001	250 ... 450V: 10 000h (Class B)
Life expectancy to EIA 456 A Jan. 89	60 000 hours at 95% survival rate
Rated capacitance C_R	3.....50µF
Tolerance	±5% other tolerances on request
Rated voltage V_R	250 / 370 / 400 / 450VAC
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}	$2.0 \cdot V_R, 10 \text{ s}$
Insulation voltage terminals to case	3000 V AC, 2 s
Insulation resistance R_{ins} or time constant τ at 20 °C, rel. Humidity $\leq 65\%$ (minimum as-delivered values)	$10000 \text{ M}\Omega \cdot \mu\text{F}$
Dissipation factor $\tan \delta$ at 20 °C	$\leq 2.0 \cdot 10^{-3} (100 \text{ Hz})$
Maximum rate of voltage rise dV/dt_{max}	10 V/ μs
Climatic data	
Climatic category	40/070/21
Lower category T_{min}	-40 °C
Upper category T_{max}	+70 °C
Damp heat test t_{test}	21 days
Mechanical and thermal properties of insulation terminal material	
Ball pressure test to IEC 60309-1 sec. 27.3	20 N at 125°C
UL 94 specification	V0 compatible
Glow wire test to IEC60335-1 / IEC 60695-2-1/1 Test temperature 550 °C for $I_R \leq 0.5\text{A}$ and 750 °C for $I_R > 0.5\text{A}$	Self-extinguishing within 2 seconds of withdrawing glow wire
Compatibility to RoHS	
Compliance to directive 2002/95/EC	
Approvals: See table for approved ratings	
CULUS UL 810 files E241095 250/300/370/400450Vac	Protected up to 5000 AFC -10,000 AFC under approval

Dimensional drawings CBB 66 (B3336*) series



Terminal option	
0 1+1 fast-on terminals 1 2+4 fast-on terminals 2 2+2 fast-on terminals 4 4+4 fast-on terminals 	
50 – Flat Oval Aluminum Can 	70 – M8 bolt: Oval Aluminum Can  Stud M8x1.25 Star Washer 8 mm Nut M8x1.25

Ordering codes and packing units

VR V AC	C _R μF	W mm	T mm	S mm	Dimensions B×A×H mm	Ordering code	Pack- ing units pcs	UL
250	3	54.5	34.5	20	31.5×51.5×55	B3336*-A1305-J0##	120	
	4	54.5	34.5	20	31.5×51.5×55	B3336*-A1405-J0##	120	
	5	54.5	34.5	20	31.5×51.5×55	B3336*-A1505-J0##	120	
	6	54.5	34.5	20	31.5×51.5×55	B3336*-A1605-J0##	120	
	7	54.5	34.5	20	31.5×51.5×55	B3336*-A1705-J0##	120	
	8	54.5	34.5	20	31.5×51.5×55	B3336*-A1805-J0##	120	
	10	54.5	34.5	20	31.5×51.5×65	B3336*-A1106-J0##	120	
	12	54.5	34.5	20	31.5×51.5×65	B3336*-A1126-J0##	120	
	15	54.5	34.5	20	31.5×51.5×65	B3336*-A1156-J0##	120	
	20	54.5	34.5	20	31.5×51.5×75	B3336*-A1206-J0##	120	
	25	54.5	34.5	20	31.5×51.5×75	B3336*-A1256-J0##	120	
	30	54.5	34.5	20	31.5×51.5×75	B3336*-A1306-J0##	120	
	35	73	48	20	45×70×65	B3336*-A1356-J0##	60	
	40	73	48	20	45×70×75	B3336*-A1406-J0##	60	
	45	73	48	20	45×70×75	B3336*-A1456-J0##	60	
	50	73	48	20	45×70×75	B3336*-A1506-J0##	60	
370	3	54.5	34.5	20	31.5×51.5×55	B3336*-A3305-J0##	120	
	4	54.5	34.5	20	31.5×51.5×55	B3336*-A3405-J0##	120	
	5	54.5	34.5	20	31.5×51.5×55	B3336*-A3505-J0##	120	
	6	54.5	34.5	20	31.5×51.5×55	B3336*-A3605-J0##	120	
	7	54.5	34.5	20	31.5×51.5×55	B3336*-A3705-J0##	120	
	8	54.5	34.5	20	31.5×51.5×55	B3336*-A3805-J0##	120	
	10	54.5	34.5	20	31.5×51.5×65	B3336*-A3106-J0##	120	
	12	54.5	34.5	20	31.5×51.5×65	B3336*-A3126-J0##	120	
	15	54.5	34.5	20	31.5×51.5×75	B3336*-A3156-J0##	120	
	20	73	48	20	45×70×65	B3336*-A3206-J0##	60	
	25	73	48	20	45×70×65	B3336*-A3256-J0##	60	
	30	73	48	20	45×70×75	B3336*-A3306-J0##	60	
	35	73	48	20	45×70×75	B3336*-A3356-J0##	60	
	40	73	48	20	45×70×85	B3336*-A3406-J0##	60	
	45	73	48	20	45×70×100	B3336*-A3456-J0##	60	
	50	73	48	20	45×70×100	B3336*-A3506-J0##	60	

VR V AC	CR μF	W mm	T mm	S mm	Dimensions B×A×H mm	Ordering code	Pack- ing units pcs	UL
400	3	54.5	34.5	20	31.5×51.5×55	B3336*-A4305-J0##	120	
	4	54.5	34.5	20	31.5×51.5×55	B3336*-A4405-J0##	120	
	5	54.5	34.5	20	31.5×51.5×55	B3336*-A4505-J0##	120	
	6	54.5	34.5	20	31.5×51.5×55	B3336*-A4605-J0##	120	
	7	54.5	34.5	20	31.5×51.5×55	B3336*-A4705-J0##	120	
	8	54.5	34.5	20	31.5×51.5×55	B3336*-A4805-J0##	120	
	10	54.5	34.5	20	31.5×51.5×65	B3336*-A4106-J0##	120	
	12	54.5	34.5	20	31.5×51.5×65	B3336*-A4126-J0##	120	
	15	54.5	34.5	20	31.5×51.5×75	B3336*-A4156-J0##	120	
	20	73	48	20	45×70×65	B3336*-A4206-J0##	60	
	25	73	48	20	45×70×65	B3336*-A4256-J0##	60	
	30	73	48	20	45×70×75	B3336*-A4306-J0##	60	
	35	73	48	20	45×70×75	B3336*-A4356-J0##	60	
	40	73	48	20	45×70×85	B3336*-A4406-J0##	60	
	45	73	48	20	45×70×100	B3336*-A4456-J0##	60	
	50	73	48	20	45×70×100	B3336*-A4506-J0##	60	
450	3	54.5	34.5	20	31.5×51.5×55	B3336*-A6305-J0##	120	
	4	54.5	34.5	20	31.5×51.5×55	B3336*-A6405-J0##	120	
	5	54.5	34.5	20	31.5×51.5×55	B3336*-A6505-J0##	120	
	6	54.5	34.5	20	31.5×51.5×55	B3336*-A6605-J0##	120	
	7	54.5	34.5	20	31.5×51.5×65	B3336*-A6705-J0##	120	
	8	54.5	34.5	20	31.5×51.5×65	B3336*-A6805-J0##	120	
	10	54.5	34.5	20	31.5×51.5×75	B3336*-A6106-J0##	120	
	12	54.5	34.5	20	31.5×51.5×75	B3336*-A6126-J0##	120	
	15	73	48	20	45×70×65	B3336*-A6156-J0##	60	
	20	73	48	20	45×70×65	B3336*-A6206-J0##	60	
	25	73	48	20	45×70×75	B3336*-A6256-J0##	60	
	30	73	48	20	45×70×85	B3336*-A6306-J0##	60	
	35	73	48	20	45×70×100	B3336*-A6356-J0##	60	
	40	73	48	20	45×70×100	B3336*-A6406-J0##	60	
	45	93	51	20	48×90×75	B3336*-A6456-J0##	45	
	50	93	51	20	48×90×85	B3336*-A6506-J0##	45	

1. For terminals replace (*) by:
 - 0 1+1 fast-on terminals
 - 1 2+4 fast-on terminals
 - 2 2+2 fast-on terminals
 - 4 4+4 fast-on terminals
2. For construction of mounting device replace (##) by:
 - 50 – Flat Oval Aluminum Can
 - 70 – M8 bolt: Oval Aluminum Can

⚠ 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.

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, EPCOS is 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 an EPCOS 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.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
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. We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CSSP, CTVS, DSSP, MiniBlue, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseMod, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.