



## **Film capacitors – AC capacitors**

### **EPCOS Feida Motor Run Capacitors**

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| <b>Series/Type:</b>   | <b>CBB66 - Single Capacitor P2 Aluminum Can Oval</b> |
| <b>Ordering code:</b> | <b>B33364</b>                                        |
| <b>Date:</b>          | <b>March. 2010</b>                                   |
| <b>Version:</b>       | <b>1</b>                                             |

## 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

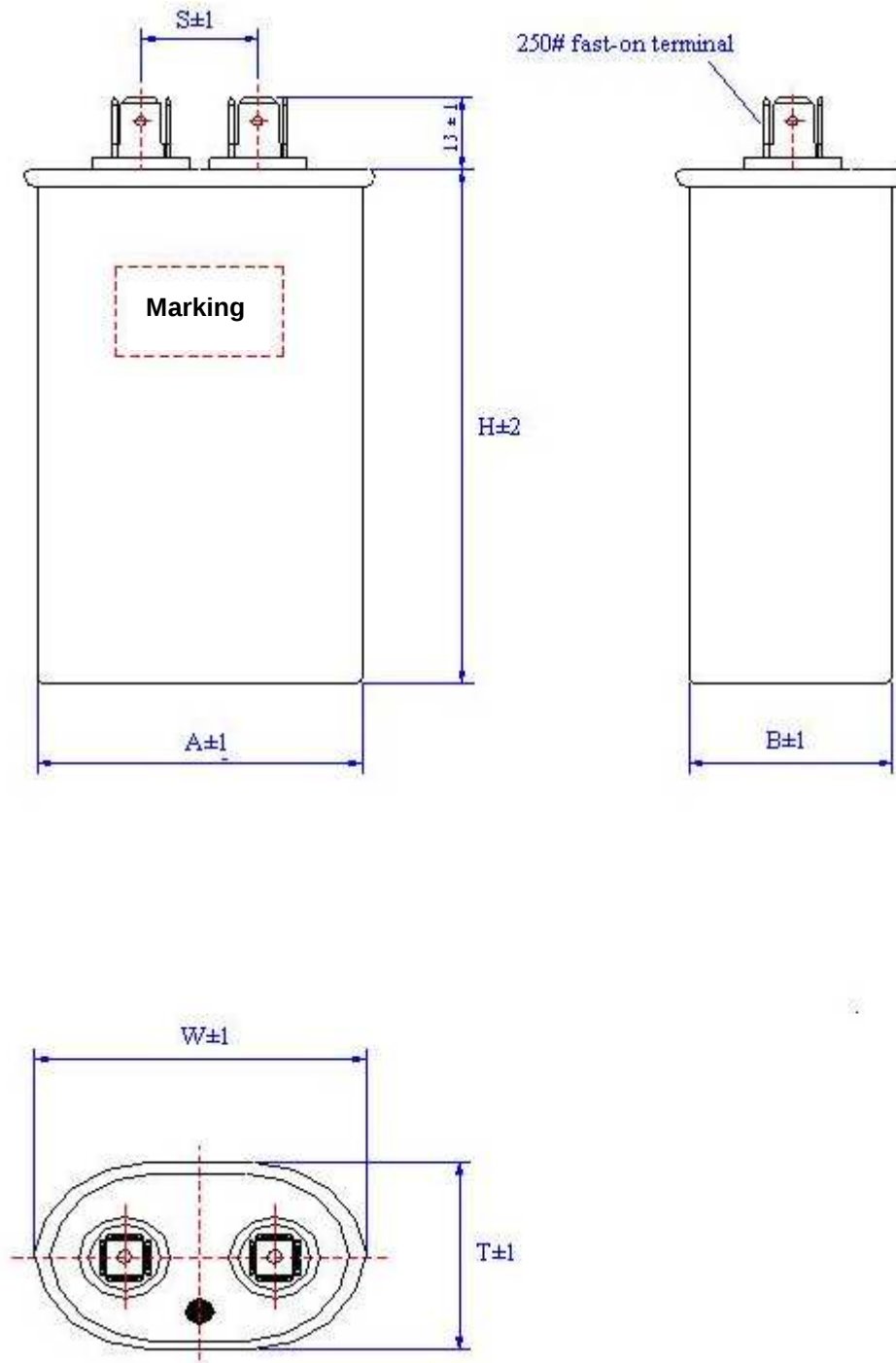
## Terminals

- 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     | 370V, 440V: 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 $V_R$                   | 370Vac, 440 Vac                          |
| 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 $\tau$<br>at 20 °C, rel. Humidity $\leq 65\%$<br>(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/ $\mu\text{s}$                                                                  |
| 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<br>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                                                                                               |                                                                                      |
|  US UL 810 files E241095<br>250/300/370/400450Vac    | Protected up to 5000 AFC<br>-10,000 AFC under approval                               |

Dimensional drawings CBB 66 (B33364) series



## Ordering codes and packing units

| VR<br>V AC | CR<br>μF | W<br>mm | T<br>mm | S<br>mm | Dimensions<br>B×A×H<br>mm | Ordering code     | Pack-<br>ing<br>units<br>pcs | UL |
|------------|----------|---------|---------|---------|---------------------------|-------------------|------------------------------|----|
| 370        | 3        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3305-J050 | 120                          |    |
|            | 4        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3405-J050 | 120                          |    |
|            | 5        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3505-J050 | 120                          |    |
|            | 6        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3605-J050 | 120                          |    |
|            | 7        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3705-J050 | 120                          |    |
|            | 7.5      | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3755-J050 | 120                          |    |
|            | 8        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A3805-J050 | 120                          |    |
|            | 10       | 54.5    | 34.5    | 20      | 31.5×51.5×65              | B33364-A3106-J050 | 120                          |    |
|            | 12       | 54.5    | 34.5    | 20      | 31.5×51.5×65              | B33364-A3126-J050 | 120                          |    |
|            | 12.5     | 54.5    | 34.5    | 20      | 31.5×51.5×75              | B33364-A3126-J550 | 120                          |    |
|            | 15       | 54.5    | 34.5    | 20      | 31.5×51.5×75              | B33364-A3156-J050 | 120                          |    |
|            | 20       | 73      | 48      | 20      | 45×70×65                  | B33364-A3206-J050 | 60                           |    |
|            | 25       | 73      | 48      | 20      | 45×70×65                  | B33364-A3256-J050 | 60                           |    |
|            | 30       | 73      | 48      | 20      | 45×70×75                  | B33364-A3306-J050 | 60                           |    |
|            | 35       | 73      | 48      | 20      | 45×70×75                  | B33364-A3356-J050 | 60                           |    |
|            | 40       | 73      | 48      | 20      | 45×70×85                  | B33364-A3406-J050 | 60                           |    |
|            | 45       | 73      | 48      | 20      | 45×70×100                 | B33364-A3456-J050 | 60                           |    |
|            | 50       | 73      | 48      | 20      | 45×70×100                 | B33364-A3506-J050 | 60                           |    |
| 440        | 3        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A5305-J050 | 120                          |    |
|            | 4        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A5405-J050 | 120                          |    |
|            | 5        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A5505-J050 | 120                          |    |
|            | 6        | 54.5    | 34.5    | 20      | 31.5×51.5×55              | B33364-A5605-J050 | 120                          |    |
|            | 7        | 54.5    | 34.5    | 20      | 31.5×51.5×65              | B33364-A5705-J050 | 120                          |    |
|            | 7.5      | 54.5    | 34.5    | 20      | 31.5×51.5×65              | B33364-A5755-J050 | 120                          |    |
|            | 8        | 54.5    | 34.5    | 20      | 31.5×51.5×65              | B33364-A5805-J050 | 120                          |    |
|            | 10       | 54.5    | 34.5    | 20      | 31.5×51.5×75              | B33364-A5106-J050 | 120                          |    |
|            | 12       | 54.5    | 34.5    | 20      | 31.5×51.5×75              | B33364-A5126-J050 | 120                          |    |
|            | 12.5     | 54.5    | 34.5    | 20      | 31.5×51.5×75              | B33364-A5126-J550 | 120                          |    |
|            | 15       | 73      | 48      | 20      | 45×70×65                  | B33364-A5156-J050 | 60                           |    |
|            | 20       | 73      | 48      | 20      | 45×70×65                  | B33364-A5206-J050 | 60                           |    |
|            | 25       | 73      | 48      | 20      | 45×70×75                  | B33364-A5256-J050 | 60                           |    |
|            | 30       | 73      | 48      | 20      | 45×70×85                  | B33364-A5306-J050 | 60                           |    |
|            | 35       | 73      | 48      | 20      | 45×70×100                 | B33364-A5356-J050 | 60                           |    |
|            | 40       | 73      | 48      | 20      | 45×70×100                 | B33364-A5406-J050 | 60                           |    |

|  |    |    |    |    |          |                   |    |  |
|--|----|----|----|----|----------|-------------------|----|--|
|  | 45 | 93 | 51 | 20 | 48×90×75 | B33364-A5456-J050 | 45 |  |
|  | 50 | 93 | 51 | 20 | 48×90×85 | B33364-A5506-J050 | 45 |  |

U 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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