

**Main applications:**

Type CBB61 Capacitors are designed to be used for motors of electric fan, exhaust fan, ventilation, air conditioners, etc.

Advantages:

- Low DF (dissipation factor)
- Flame retardant plastic box (PBT)
- Small size and light weight
- Top security
- High insulation resistance
- UL-810 construction certified
- RoHS compliant

Specifications:

Capacitance Range: 1.0uF to 20uF

Capacitance Tolerance: +/-10% standard

AC Voltage Range: 150VAC to 450VAC

Voltage Testing:

T-T (terminal to terminal): $2.0U_n$ (rated voltage)/2S

T-C (terminal to case): 2200VAC/2S

Insulation resistance:

T-T (terminal to terminal): more than 1000 Mohm uF

T-C (terminal to case): 10 MΩ Measured at 100V.AC, 60s. And 25

Frequency: 50/60Hz

DF (dissipation factor): shall not be greater than 0.35% at 60Hz

Temperature Range: -25C to +70C standard

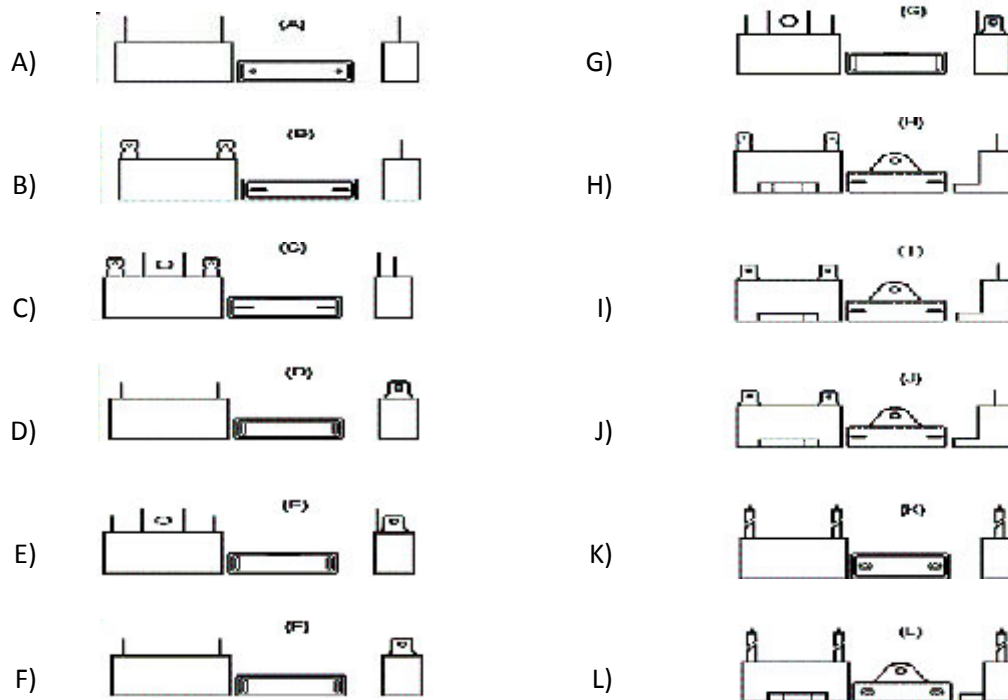
Approval Certification: UL, cUL, CE, VDE, TUV, CQC

Construction characters:

MPP film: The capacitors' windings are manufactured with MPP film which is metalized with a thin self-healing mixture of zinc and aluminum directly on one side of the polypropylene film under vacuum. The film is wound into stable cylindrical windings. The ends of the capacitor windings are sprayed with metal powder which facilitating a high current load and ensuring a low-inductance connection between the terminals and windings.

No oil, filled with epoxy resin: The capacitors are filled with epoxy resin which is flame retardant and compliant with UL94V-0.

Lead types: Terminals; tinned copper clad steel wire radial leads; soldering terminals; UL 1015 or UL 1007 stranded PVC insulation wire.



Integral mounting ear: Many type CBB61 capacitors have integral mounting ears. This ear makes it an excellent choice for difficult to mount applications and the choice of terminal configurations is another big plus.

Knowledge points:

"Self-healing": CBB61 is a kind of self-healing capacitor. In the event of a voltage breakdown in the dielectric the metal layers around the breakdown channel are evaporated by the temperature of the electric arc that forms between the electrodes. They are removed within a few microseconds and pushed apart by the overpressure generated in the center of the breakdown spot. An insulation area is formed which is reliably resistive and voltage proof for all operating requirements of the capacitor. The capacitor remains fully functional during and after the breakdown.

Mounting: All capacitors can be mounted in any position.

Service life: In accordance with applicable standards (such as IEC 60252-1-2010), capacitor's service life is classified in some grades (see the right chart).

Application Class	Service Life
A	30,000h
B	10,000h
C	3,000h
D	1,000h

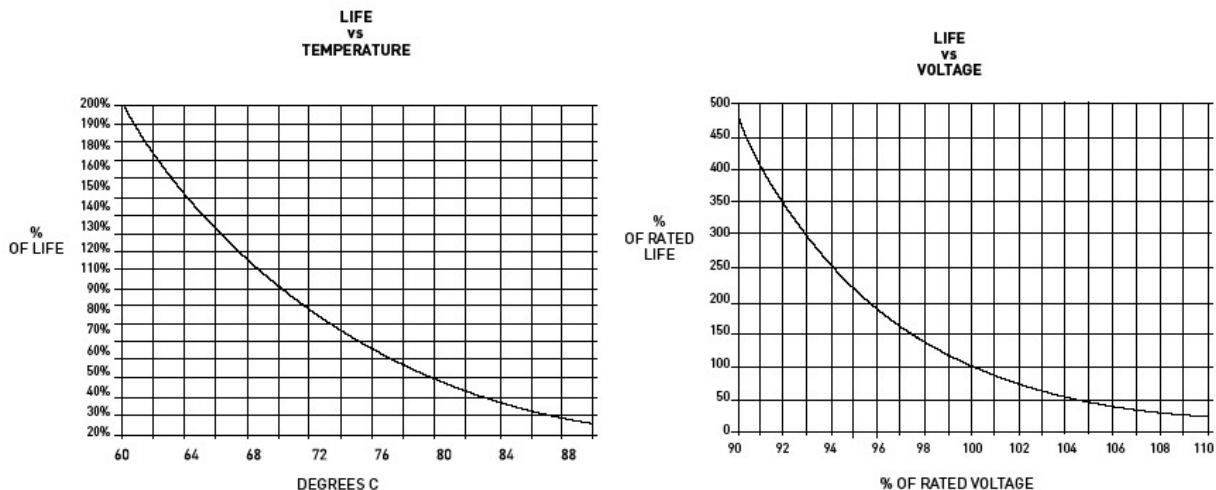
Life test: Test conditions: applied voltage and temperature: 1.25Un at 85 .
 Capacitance change $\pm 3\%$; 1 piece $> \pm 3\%$ on tested for EN60252-1 approved ratings.

Damp Heat test:

Test conditions: temperature= 40 ± 2 ; relative humidity= $93 \pm 2\%$; test duration=56 days.
 Performance: capacitance change $\pm 2\%$; DF change 0.001 at 1kHz for Cr < 15uF; DF change 0.0015 at 1kHz for Cr ≥ 15 uF; IR 50% of initial limit value.

Capacitance's tolerance under different temp.: The capacitance of all capacitors should be within the specified tolerance limits of the nominal rating when measured at temperature of +25C. When measured at the operating case temperature limits, the capacitance of the capacitors will not change by more than -5% to +2% of the +25C capacitance value. Capacitance measurements shall be made on an AC bridge at a frequency of 60Hz.

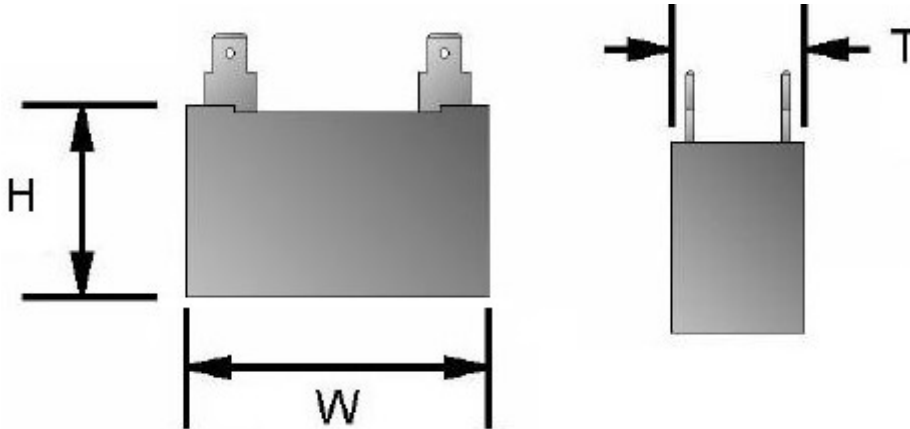
Main factors influencing capacitor's life: The service life of a capacitor will be shortened by exceeding the voltage and temperature rating.



RoHS compliant: It means the capacitor complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), Poly-Brominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Safety protection: Degree of safety protection is always identified by one of below 3 codes to be marked on the capacitor:

- (P2) indicates that the capacitor will fail in the open-circuit mode only and is protected against fire or shock hazard.
- (P1) indicates that the capacitor will fail in the open-circuit OR short-circuit mode and is protected against fire or shock hazard.
- (P0) indicates that the capacitor has no specific failure protection.



Size list: here only sizes of 250V and 350V given for example.

Cap. (uF)	250VAC			350VAC		
	Size A(mm)	Size B(mm)	Size C(mm)	Size A(mm)	Size B(mm)	Size C(mm)
1	37	12	26	37	14	28
1.2	37	12	26	37	14	28
1.5	37	12	26	37	14	28
2	37	14	28	37	14	28
2.5	37	14	28	37	18	30
3	37	18	30	37	18	30
3.5	37	18	30	37	18	30
4	37	18	30	47	18	28
4.5	37	18	30	47	18	34
5	47	18	28	47	18	34
6	47	18	34	47	22	34
7	47	18	34	47	26	38
8	47	22	34	47	26	38
9	47	22	34	47	26	38
10	47	26	38	57	21	37
20	58	29	43	60	30	50