



Type CBB65

1. Scope

This specification is suitable for A.C. motor running capacitors type CBB65 supplied to territories outside mainland of China made by Anhui Tongfeng Electronics Co., LTD. The capacitors are made of metallized polypropylene film and intended to be applied to start and run AC single-phase motors working at rated voltage 250V/370V/440V(450V), frequency 50Hz/60Hz. The capacitor is complied with EIA456/IEC60252 and UL810.

2. Service conditions

The capacitor should be prevented from exposing in sunlight directly and rain or snow will cause insulating failure between terminals and terminals to case of the capacitor. Followings are detailed service conditions.

2.1 Altitude:

Not exceeding 2000 meter.

2.2 Residual voltage while loading:

Not exceeding 10% rated voltage.

2.3 Pollution:

The capacitors are suitable to operating in lightly polluted atmospheres.

3. Overloads

3.1 Maximum permissible voltage

Not exceeding 1.1 times the rated voltage.

3.2 Maximum permissible current

Not exceeding 1.3 times the current that occurs at rated sinusoidal voltage and rated frequency.

3.3 Maximum permissible reactive output

The overloads resulting from operation at voltage and current exceeding the rated values (even though within the limits indicated in 3.1 and 3.2) should be less than 1.35 times the rated output (reactive power).

4. Capacitor Certificates

The capacitor has certificates of CQC、TUV、UL/CUL、VDE.

5. The specification & dimensions

Table 1 listed properties of capacitor type CBB65. Others referred to EIA60252, IEC60252-1:2013 and UL810.



Table 1: Properties of Capacitor Type CBB65

Rated voltage	250VAC; 370VAC; 440VAC(450VAC)
Rated frequency	50/60Hz
Capacitance Tolerance	±5%
Test voltage between Terminals, (Ut-t)	1.5Un, 2s 1.5Un, 60s
Test voltage between Terminal to case (Ut-c)	3000Vac, 2s 3000 Vac, 60s
Dissipation factor (tgδ)	≤0.0020 (100Hz)
Insulation resistance	$R \cdot C \geq 3000 M\Omega \cdot \mu F(s)$
Operating temperature range	-40°C ~ +70/+85°C
Hot and humid harsh degrees	21 days
Expected operating life	When operated at rated voltage and rated case temperature capacitor survival shall be not less than 94% after 60,000 hours operation. (EIA60252) Class A: 30000h: 1.25Un、70/85±2°C、6000h Class B: 10000h: 1.25Un、70/85±2°C、2000h (IEC60252)
Class of safety protection/Anti-explosion device	The capacitor has UL certificate of 10,000 AFC . According to IEC60252, the capacitor has Class P2/S2 safety protection. That is the capacitor is designed with a pressure-sensitive interrupter (PSI) as a device of anti-explosion protection. The failure mode of the capacitor is cutting off from circuit in the case of the PSI device acting.
Cooling	Naturally air

6. Structure of Type CBB65

6.1 Product Configuration

The capacitor is designed and manufactured in round or oval with oil filling in aluminum can, with single or

dual structure leaded with two terminals or three terminals.

6.2 Winding core of the capacitor

The winding core of the capacitor takes heavy-edge metallized Al/Zn PP film as dielectric and electrode, on each of two sides of winding core is sprayed by metal Zinc for leads soldering.

6.3 Aluminum Can

The can of capacitor is made of aluminum alloy LF21, which meets the requirements of UL810 “Capacitor”.

6.4 Terminals and cover

The cover of capacitor is made of alloy of aluminum and manganese. Terminals are made of 250# Tinned Steel and in the form of quick-connect terminals.

6.5 Marking

The capacitor is labelled of adhesive aluminized label or laser printing.

7. Mounting requirements

The capacitor needs not less than 15 mm space up from terminals for cover’s moving up in the case of PSI device action while the capacitor is mounted.

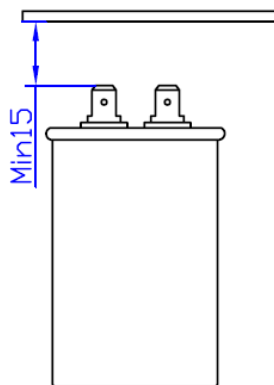


Fig1: Mounting space

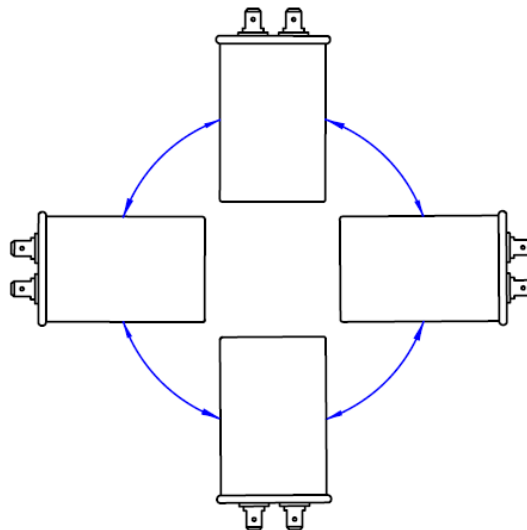


Fig 2: 360 degrees direction arbitrary installation

8. Packaging and storing

The capacitor is packaged in single separated segment box organized in double corrugated paperboard carton, normally in 50 pcs, which prevents the properties of capacitor from damage during transferring and storing in not lower than -40°C. The capacitors should be damp-proofed, put down gently and right in side during

transferring and storing. The stacked limitation of capacitor cartons is eight layers. Please open the box as the direction indicating on carton.

The Capacitor must be stored under the temperature between 10~38°C and relative humidity less than 70% for less than 12 months.

9. Others

Please refer to EIA456, IEC60252 and UL810 for matters not covered above or contact with our sales office or representatives in your location for special requests.

10. Dimensions data

Table 2: Data of dimension

Rated voltage (VAC)	Cn (μ F)	ϕ D		ϕ D'		H	
		in	mm	in	mm	in	mm
250	10	1.57	40.0	1.71	43.5	1.97	50
250	12.5	1.57	40.0	1.7	43.5	2.0	55
250	15	1.57	40.0	1.71	43.5	2.17	55
250	20	1.77	45.0	1.91	48.5	2.17	55
250	25	1.77	45.0	1.91	48.5	2.36	60
250	30	1.77	45.0	1.91	48.5	2.56	65
250	35	1.77	45.0	1.91	48.5	2.76	70
250	40	1.77	45.0	1.91	48.5	2.95	75
250	45	1.77	45.0	1.91	48.5	3.15	80
250	50	1.77	45.0	1.91	48.5	3.54	90
250	55	1.97	50.0	2.11	53.5	3.15	80
250	60	1.97	50.0	2.11	53.5	3.35	85
250	65	1.97	50.0	2.11	53.5	3.54	90
250	70	1.97	50.0	2.11	53.5	3.74	95
250	75	1.97	50.0	2.11	53.5	3.94	100
250	80	1.97	50.0	2.11	53.5	3.94	100
250	90	2.50	63.5	2.64	67.0	4.33	110
250	100	2.50	63.5	2.64	67.0	4.72	120
250	15+2	1.97	50	2.11	53.5	2.76	70
250	15+3	1.97	50	2.11	53.5	2.76	70
250	15+5	1.97	50	2.11	53.5	2.36	60
250	15+10	1.97	50	2.11	53.5	2.36	60
250	20+2	1.97	50	2.11	53.5	2.76	70



250	20+3	1.97	50	2.11	53.5	2.76	70
250	20+5	1.97	50	2.11	53.5	2.36	60
250	25+2	1.97	50	2.11	53.5	2.76	70
250	25+3	1.97	50	2.11	53.5	2.76	70
250	25+5	1.97	50	2.11	53.5	2.56	65
250	25+7.5	1.97	50	2.11	53.5	2.56	65
250	25+10	1.97	50	2.11	53.5	2.76	70
250	30+2	1.97	50	2.11	53.5	2.95	75
250	30+3	1.97	50	2.11	53.5	2.95	75
250	30+5	1.97	50	2.11	53.5	2.76	70
250	30+7.5	1.97	50	2.11	53.5	2.76	70
250	35+2	1.97	50	2.11	53.5	3.15	80
250	35+3	1.97	50	2.11	53.5	3.15	80
250	35+4	1.97	50	2.11	53.5	3.35	85
250	35+5	1.97	50	2.11	53.5	3.35	85
250	35+7.5	1.97	50	2.11	53.5	2.95	75
250	35+10	1.97	50	2.11	53.5	2.95	75
250	40+3	1.97	50	2.11	53.5	3.35	85
250	40+4	1.97	50	2.11	53.5	3.54	90
250	40+5	1.97	50	2.11	53.5	3.54	90
250	40+6	1.97	50	2.11	53.5	3.15	80
250	40+10	1.97	50	2.11	53.5	3.15	80
250	40+12.5	1.97	50	2.11	53.5	3.35	85
250	45+5	1.97	50	2.11	53.5	3.74	95
250	45+6	1.97	50	2.11	53.5	3.15	80
250	45+10	1.97	50	2.11	53.5	3.35	85
250	45+12	1.97	50	2.11	53.5	3.35	85
250	45+15	1.97	50	2.11	53.5	3.54	90
250	50+5	1.97	50	2.11	53.5	3.94	100
250	50+6	1.97	50	2.11	53.5	3.94	100
250	50+10	1.97	50	2.11	53.5	3.54	90
250	50+12	1.97	50	2.11	53.5	3.54	90
250	55+5	1.97	50	2.11	53.5	4.13	105
250	55+6	1.97	50	2.11	53.5	4.13	105



250	55+7.5	1.97	50	2.11	53.5	3.54	90
250	55+10	1.97	50	2.11	53.5	3.74	95
250	60+5	1.97	50	2.11	53.5	4.33	110
250	60+7.5	1.97	50	2.11	53.5	3.74	95
250	60+15	1.97	50	2.11	53.5	4.13	105
250	60+18	1.97	50	2.11	53.5	4.13	105
250	70+5	1.97	50	2.11	53.5	4.72	120
250	70+10	1.97	50	2.11	53.5	4.13	105
250	80+5	1.97	50	2.11	53.5	4.92	125
250	80+10	1.97	50	2.11	53.5	4.53	115
250	80+12.5	1.97	50	2.11	53.5	4.53	115
370	2	1.38	35.0	1.50	38.0	1.97	50
370	5	1.57	40.0	1.71	43.5	1.97	50
370	7.5	1.57	40.0	1.71	43.5	2.17	55
370	10	1.77	45.0	1.91	48.5	2.17	55
370	12.5	1.77	45.0	1.91	48.5	2.36	60
370	15	1.77	45.0	1.91	48.5	2.36	60
370	20	1.77	45.0	1.91	48.5	2.76	70
370	25	1.77	45.0	1.91	48.5	2.95	75
370	30	1.77	45.0	1.91	48.5	3.15	80
370	35	1.97	50.0	2.11	53.5	2.95	75
370	40	1.97	50.0	2.11	53.5	3.15	80
370	45	1.97	50.0	2.11	53.5	3.54	90
370	50	1.97	50.0	2.11	53.5	3.74	95
370	55	1.97	50.0	2.11	53.5	3.94	100
370	60	1.97	50.0	2.11	53.5	4.33	110
370	65	2.50	63.5	2.64	67.0	3.74	95
370	70	2.50	63.5	2.64	67.0	3.74	95
370	75	2.50	63.5	2.64	67.0	3.74	95
370	80	2.50	63.5	2.64	67.0	3.94	100
370	90	2.50	63.5	2.64	67.0	4.13	105
370	100	2.50	63.5	2.64	67.0	4.33	110
370	15+2	1.97	50.0	2.11	53.5	2.76	70
370	15+3	1.97	50.0	2.11	53.5	2.95	75



370	15+5	1.97	50.0	2.11	53.5	2.56	65
370	15+10	1.97	50.0	2.11	53.5	2.76	70
370	20+2	1.97	50.0	2.11	53.5	2.95	75
370	20+3	1.97	50.0	2.11	53.5	3.15	80
370	20+5	1.97	50.0	2.11	53.5	2.76	70
370	25+2	1.97	50.0	2.11	53.5	3.15	80
370	25+3	1.97	50.0	2.11	53.5	3.35	85
370	25+5	1.97	50.0	2.11	53.5	2.95	75
370	25+7.5	1.97	50.0	2.11	53.5	3.15	80
370	25+10	1.97	50.0	2.11	53.5	3.15	80
370	30+2	1.97	50.0	2.11	53.5	3.54	90
370	30+3	1.97	50.0	2.11	53.5	3.74	95
370	30+5	1.97	50.0	2.11	53.5	3.15	80
370	30+7.5	1.97	50.0	2.11	53.5	3.35	85
370	35+2	1.97	50.0	2.11	53.5	3.74	95
370	35+3	1.97	50.0	2.11	53.5	3.94	100
370	35+4	1.97	50.0	2.11	53.5	3.94	100
370	35+5	1.97	50.0	2.11	53.5	3.54	90
370	35+7.5	1.97	50.0	2.11	53.5	3.54	90
370	35+10	1.97	50.0	2.11	53.5	3.74	95
370	40+3	1.97	50.0	2.11	53.5	4.13	105
370	40+4	1.97	50.0	2.11	53.5	4.13	105
370	40+5	2.50	63.5	2.64	67	3.35	85
370	40+6	2.50	63.5	2.64	67	3.35	85
370	40+10	2.50	63.5	2.64	67	3.15	80
370	40+12.5	2.50	63.5	2.64	67	3.15	80
370	45+5	2.50	63.5	2.64	67	3.54	90
370	45+6	2.50	63.5	2.64	67	3.15	80
370	45+10	2.50	63.5	2.64	67	3.35	85
370	45+12	2.50	63.5	2.64	67	3.35	85
370	45+15	2.50	63.5	2.64	67	3.35	85
370	50+5	2.50	63.5	2.64	67	4.53	115
370	50+6	2.50	63.5	2.64	67	3.15	80
370	50+10	2.50	63.5	2.64	67	3.35	85



370	50+12	2.50	63.5	2.64	67	3.54	90
370	55+5	2.50	63.5	2.64	67	3.35	85
370	55+6	2.50	63.5	2.64	67	3.35	85
370	55+7.5	2.50	63.5	2.64	67	3.54	90
370	55+10	2.50	63.5	2.64	67	3.54	90
370	60+5	2.50	63.5	2.64	67	4.13	105
370	60+7.5	2.50	63.5	2.64	67	3.74	95
370	60+15	2.50	63.5	2.64	67	3.94	100
370	60+18	2.50	63.5	2.64	67	3.94	100
370	70+5	2.50	63.5	2.64	67	4.33	110
370	70+10	2.50	63.5	2.64	67	4.13	105
370	80+5	2.50	63.5	2.64	67	4.72	120
370	80+10	2.50	63.5	2.64	67	4.53	115
370	80+12.5	2.50	63.5	2.64	67	4.53	115
440	2	1.38	35.0	1.50	38.0	1.97	50
440	5	1.57	40.0	1.71	43.5	1.97	50
440	7.5	1.57	40.0	1.71	43.5	21.7	55
440	10	1.77	45.0	1.91	48.5	2.17	55
440	12.5	1.77	45.0	1.91	48.5	2.36	60
440	15	1.77	45.0	1.91	48.5	2.56	65
440	20	1.77	45.0	1.91	48.5	2.95	75
440	25	1.77	45.0	1.91	48.5	3.54	90
440	30	1.97	50.0	2.11	53.5	3.35	85
440	35	1.97	50.0	2.11	53.5	3.54	90
440	40	1.97	50.0	2.11	53.5	3.94	100
440	45	1.97	50.0	2.11	53.5	4.33	110
440	50	1.97	50.0	2.11	53.5	4.72	120
440	55	2.50	63.5	2.64	67.0	3.74	95
440	60	2.50	63.5	2.64	67.0	3.94	100
440	65	2.50	63.5	2.64	67.0	4.13	105
440	70	2.50	63.5	2.64	67.0	4.33	110
440	75	2.50	63.5	2.64	67.0	4.53	115
440	80	2.50	63.5	2.64	67.0	4.72	120
440	90	2.50	63.5	2.64	67.0	5.12	130



440	100	2.50	63.5	2.64	67.0	5.31	135
440	15+2	1.97	50.0	2.11	53.5	2.95	75
440	15+3	1.97	50.0	2.11	53.5	2.76	70
440	15+5	1.97	50.0	2.11	53.5	2.76	70
440	15+10	1.97	50.0	2.11	53.5	3.15	80
440	20+2	1.97	50.0	2.11	53.5	3.35	85
440	20+3	1.97	50.0	2.11	53.5	3.54	90
440	20+5	1.97	50.0	2.11	53.5	3.15	80
440	25+2	1.97	50.0	2.11	53.5	3.74	95
440	25+3	1.97	50.0	2.11	53.5	3.94	100
440	25+5	1.97	50.0	2.11	53.5	3.54	90
440	25+7.5	1.97	50.0	2.11	53.5	3.74	95
440	25+10	1.97	50.0	2.11	53.5	3.74	95
440	30+2	1.97	50.0	2.11	53.5	4.13	105
440	30+3	1.97	50.0	2.11	53.5	4.33	110
440	30+5	1.97	50.0	2.11	53.5	3.74	95
440	30+7.5	1.97	50.0	2.11	53.5	3.94	100
440	35+2	1.97	50.0	2.11	53.5	4.33	110
440	35+3	1.97	50.0	2.11	53.5	4.53	115
440	35+4	1.97	50.0	2.11	53.5	4.92	125
440	35+5	1.97	50.0	2.11	53.5	4.13	105
440	35+7.5	1.97	50.0	2.11	53.5	4.33	110
440	35+10	1.97	50.0	2.11	53.5	4.53	115
440	40+3	2.50	63.5	2.64	67	3.94	100
440	40+4	2.50	63.5	2.64	67	3.94	100
440	40+5	2.50	63.5	2.64	67	3.54	90
440	40+6	2.50	63.5	2.64	67	3.54	90
440	40+10	2.50	63.5	2.64	67	3.74	95
440	40+12.5	2.50	63.5	2.64	67	3.74	95
440	45+5	2.50	63.5	2.64	67	3.74	95
440	45+6	2.50	63.5	2.64	67	3.74	95
440	45+10	2.50	63.5	2.64	67	3.94	100
440	45+12	2.50	63.5	2.64	67	3.94	100
440	45+15	2.50	63.5	2.64	67	4.13	105



440	50+5	2.50	63.5	2.64	67	3.94	100
440	50+6	2.50	63.5	2.64	67	3.94	100
440	50+10	2.50	63.5	2.64	67	4.13	105
440	50+12	2.50	63.5	2.64	67	4.13	105
440	55+5	2.50	63.5	2.64	67	4.53	115
440	55+6	2.50	63.5	2.64	67	4.13	105
440	55+7.5	2.50	63.5	2.64	67	4.13	105
440	55+10	2.50	63.5	2.64	67	4.33	110
440	60+5	2.50	63.5	2.64	67	4.72	120
440	60+7.5	2.50	63.5	2.64	67	4.33	110
440	60+15	2.50	63.5	2.64	67	4.72	120
440	60+18	2.50	63.5	2.64	67	4.92	125
440	70+5	2.50	63.5	2.64	67	5.12	130
440	70+10	2.50	63.5	2.64	67	4.92	125
440	80+5	2.50	63.5	2.64	67	5.71	145
440	80+10	2.50	63.5	2.64	67	5.31	135
440	80+12.5	2.50	63.5	2.64	67	5.51	140
450	2	1.38	35.0	1.50	38.0	1.97	50
450	5	1.57	40.0	1.71	43.5	1.97	50
450	7.5	1.57	40.0	1.71	43.5	21.7	55
450	10	1.77	45.0	1.91	48.5	2.17	55
450	12.5	1.77	45.0	1.91	48.5	2.36	60
450	15	1.77	45.0	1.91	48.5	2.56	65
450	20	1.77	45.0	1.91	48.5	2.95	75
450	25	1.77	45.0	1.91	48.5	3.54	90
450	30	1.97	50.0	2.11	53.5	3.35	85
450	35	1.97	50.0	2.11	53.5	3.54	90
450	40	1.97	50.0	2.11	53.5	3.94	100
450	45	1.97	50.0	2.11	53.5	4.33	110
450	50	1.97	50.0	2.11	53.5	4.72	120
450	55	2.50	63.5	2.64	67.0	3.74	95
450	60	2.50	63.5	2.64	67.0	3.94	100
450	65	2.50	63.5	2.64	67.0	4.13	105
450	70	2.50	63.5	2.64	67.0	4.33	110



450	75	2.50	63.5	2.64	67.0	4.53	115
450	80	2.50	63.5	2.64	67.0	4.72	120
450	90	2.50	63.5	2.64	67.0	5.12	130
450	100	2.50	63.5	2.64	67.0	5.31	135
450	15+2	1.97	50.0	2.11	53.5	2.95	75
450	15+3	1.97	50.0	2.11	53.5	2.76	70
450	15+5	1.97	50.0	2.11	53.5	2.76	70
450	15+10	1.97	50.0	2.11	53.5	3.15	80
450	20+2	1.97	50.0	2.11	53.5	3.35	85
450	20+3	1.97	50.0	2.11	53.5	3.54	90
450	20+5	1.97	50.0	2.11	53.5	3.15	80
450	25+2	1.97	50.0	2.11	53.5	3.74	95
450	25+3	1.97	50.0	2.11	53.5	3.94	100
450	25+5	1.97	50.0	2.11	53.5	3.54	90
450	25+7.5	1.97	50.0	2.11	53.5	3.74	95
450	25+10	1.97	50.0	2.11	53.5	3.74	95
450	30+2	1.97	50.0	2.11	53.5	4.13	105
450	30+3	1.97	50.0	2.11	53.5	4.33	110
450	30+5	1.97	50.0	2.11	53.5	3.74	95
450	30+7.5	1.97	50.0	2.11	53.5	3.94	100
450	35+2	1.97	50.0	2.11	53.5	4.33	110
450	35+3	1.97	50.0	2.11	53.5	4.53	115
450	35+4	1.97	50.0	2.11	53.5	4.92	125
450	35+5	1.97	50.0	2.11	53.5	4.13	105
450	35+7.5	1.97	50.0	2.11	53.5	4.33	110
450	35+10	1.97	50.0	2.11	53.5	4.53	115
450	40+3	2.50	63.5	2.64	67	3.94	100
450	40+4	2.50	63.5	2.64	67	3.94	100
450	40+5	2.50	63.5	2.64	67	3.54	90
450	40+6	2.50	63.5	2.64	67	3.54	90
450	40+10	2.50	63.5	2.64	67	3.74	95
450	40+12.5	2.50	63.5	2.64	67	3.74	95
450	45+5	2.50	63.5	2.64	67	3.74	95
450	45+6	2.50	63.5	2.64	67	3.74	95



450	45+10	2.50	63.5	2.64	67	3.94	100
450	45+12	2.50	63.5	2.64	67	3.94	100
450	45+15	2.50	63.5	2.64	67	4.13	105
450	50+5	2.50	63.5	2.64	67	3.94	100
450	50+6	2.50	63.5	2.64	67	3.94	100
450	50+10	2.50	63.5	2.64	67	4.13	105
450	50+12	2.50	63.5	2.64	67	4.13	105
450	55+5	2.50	63.5	2.64	67	4.53	115
450	55+6	2.50	63.5	2.64	67	4.13	105
450	55+7.5	2.50	63.5	2.64	67	4.13	105
450	55+10	2.50	63.5	2.64	67	4.33	110
450	60+5	2.50	63.5	2.64	67	4.72	120
450	60+7.5	2.50	63.5	2.64	67	4.33	110
450	60+15	2.50	63.5	2.64	67	4.72	120
450	60+18	2.50	63.5	2.64	67	4.92	125
450	70+5	2.50	63.5	2.64	67	5.12	130
450	70+10	2.50	63.5	2.64	67	4.92	125
450	80+5	2.50	63.5	2.64	67	5.71	145
450	80+10	2.50	63.5	2.64	67	5.31	135
450	80+12.5	2.50	63.5	2.64	67	5.51	140