



CAPACITORS

Drive Devices to their Maximum Potential



SINCE 1992

Solid Experience

A Specialized China Capacitor Manufacturer

Being deeply diving in the capacitor development for almost 30 years, Topo has become a capacitor manufacturer obtaining mature technology and experience. For years, Topo has been committed to the max profits of our valued customers.

To ensure the outstanding property and quality of capacitors, our factory is equipped with numbers of state-of-the-art facilities including automatic high-speed winders, film slitting machines, gold injection machines, advanced drying machines and more.





Quality-focused Manufacturing Process

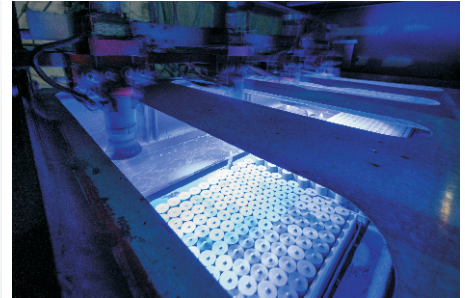
Topo adopts a complete range of advanced automatic and semi-auto equipment in our capacitor factory, meeting the testing and certification requirements concerning high safety.



Film Slitting
Slitting the metalized mother rolls.



Winding
High-Speed winding metalized film.



Metal Spraying
Spraying gold to zinc wire cores.



Heating and Drying
1 hour in 80°C, 7 hours in 95-100°C



Voltage Withstanding Test
Voltage testing dielectric property.



Terminal Welding
Welding terminals on the end contract



Coating Lacquering
Filling insulating fluid for protection.



2nd Drying
Another heating for high safety.



Electrical End Test
Capacitance, dissipation, impedance test.



Label Printing
Printing rating labels on capacitors.



Packaging
Careful packaging with full protection.

Starting Capacitor NJS Series



Construction

- Dielectric: polypropylene film
- Plastic & Round can
- Dry type

Features

- Self-heating properties
- Low dissipation factor
- P0 safety class to IEC 60252-1
- High insulation resistance

Typical applications

- For general sine wave applications, mainly as motor starting capacitor.

Mounting parts (optional)

- Threaded stud at bottom of can (M8, max.torque=5 Nm)
- Fast fixation for mounting into a hole of Ø8 mm

Technical data and specifications

Reference standards	IEC 60252-1
Safety class according IEC 60252-1	P0
Life expectancy to IEC 60252-1	3,000(C) ~ 10,000h(B)
Rated capacitance CR	1µF ~ 120µF (MFD)
Tolerance	± 5%
Rated voltage VR	110VAC ~ 630VAC
Rated frequency FR	50/60Hz
Maximum permissible voltage Vmax	1.1 x VR (VR=Rated voltage)
Maximum permissible current Imax	1.3 x IR (IR=Rated current)
AC test voltage terminal to terminal VTT	2 x VR, 2s (routine test) 2 x VR, 60s (type test)
Dissipation factor tan δ	≤0.002 (50Hz)
Climate types	25/085/21 to IEC 60068-1

Dimensions (mm)

(µF/ MFD)	250-300Vac				450-500Vac			
	Without M8 Stud		M8 Stud		Without M8 Stud		M8 Stud	
	Φ	H	Φ	H	Φ	H	Φ	H
1	30	50	30	57	30	50	30	57
1.5	30	50	30	57	30	50	30	57
2	30	50	30	57	30	50	30	57
2.5	30	50	30	57	30	50	30	57
3	30	50	30	57	30	50	30	57
3.5	30	50	30	57	30	50	30	57
5	30	50	30	57	30	60	35	65
6	30	50	30	57	30	60	35	65
8	30	50	30	57	35	60	35	65
10	30	60	35	65	35	60	40	70
12	30	60	35	65	35	70	40	70
12.5	30	60	35	65	35	70	40	70
14	35	60	35	65	40	70	40	70
15	35	60	35	65	40	70	40	95
16	35	60	35	65	40	70	40	95
18	35	60	35	65	40	70	40	95
20	35	70	40	70	40	93	40	95
22	35	70	40	70	40	93	40	95
24	35	70	40	70	40	93	40	95
25	35	70	40	70	40	93	40	95
28	40	70	40	70	45	93	50	106
30	40	70	40	95	45	93	50	106
31.5	40	70	40	95	45	93	50	106
35	40	93	40	95	45	93	50	106
40	40	93	40	95	50	92	50	106
45	45	93	40	95	50	92	50	106
50	45	93	50	106	50	100	50	116
55	45	93	50	106	50	100	50	116
60	45	93	50	106	50	120	50	116
65	50	92	50	106	50	120	50	116
70	50	92	50	106	55	120	50	116
75	50	92	50	106	55	120		
80	50	92	50	106	55	120		
85	50	100	50	106	60	120		
90	50	100	50	106	60	120		
95	50	120	50	116	60	120		
100	50	120	50	116	60	120		
110	50	120	50	116				
120	50	120						



Starting Capacitor NJS Series



Construction

- Dielectric: polypropylene film
- Aluminum Round & Oval can
- Oil type

Features

- Self-heating properties.
- Low dissipation factor.
- Explosion proof device
- Highest safety level P2 safety class to IEC 60252-1
- High insulation resistance

Terminals

- Fast on

Mounting parts (optional)

- Threaded stud at bottom of can (M8, max.torque=5 Nm).
- Fast fixation for mounting into a hole of Ø8 mm.

Technical data and specifications

Reference standards	IEC 60252-1
Safety class according IEC 60252-1	P2
Life expectancy to IEC 60252-1	3,000(C) ~ 10,000h(B)
Rated capacitance CR	2µF ~ 150µF (MFD)
Tolerance	± 5%
Rated voltage VR	110VAC ~ 630VAC
Rated frequency FR	50/60Hz
Maximum permissible votage Vmax	1.1 x VR (VR=Rated voltage)
Maximum permissible current Imax	1.3 x IR (IR=Rated current)
AC test voltage terminal to terminal VTT	2 x VR, 2s (routine test) 2 x VR, 60s (type test)
Insulation voltage terminal to case	1.75 x VR, 2s (type test) 1.75 x VR, 60s (routine test)
Dissipation factor tan δ	≤0.002 (50Hz)
Climate types	25/085/21 to IEC 60068-1

Dimensions (mm) (Single)

(uF/ MFD)	Cylinder Case				Oval Case	
	370VAC		440/450VAC		370VAC	440/450VAC
	Φ	H	Φ	H	LxBxH	LxBxH
2	40	60	40	60	50x32x60	50x32x60
4	40	60	40	60	50x32x60	50x32x60
6	40	60	40	60	50x32x60	50x32x60
7.5	40	60	40	60	50x32x60	50x32x60
8	40	60	40	70	50x32x60	50x32x60
10	40	70	40	70	50x32x60	50x32x60
12	40	70	40	80	50x32x60	70x45x80
12.5	40	70	40	80	50x32x60	70x45x80
14	40	80	40	80	50x32x60	70x45x80
15	40	80	40	80	50x32x60	70x45x80
16	40	80	45	90	70x45x80	70x45x80
18	40	80	45	90	70x45x80	70x45x80
20	40	80	45	90	70x45x80	70x45x80
21.5	40	80	45	90	70x45x80	70x45x80
22.5	40	80	45	90	70x45x80	70x45x80
25	45	90	45	90	70x45x80	70x45x80
30	50	100	50	100	70x45x90	70x45x80
35	50	100	50	110	70x45x80	70x45x80
40	50	110	50	110	70x45x90	70x45x110
45	50	110	50	120	70x45x90	70x45x110
50	50	110	50	120	70x45x90	70x45x110
55	55	130	55	130	70x45x110	70x45x110
60	55	130	55	130	70x45x110	70x45x130
70	60	120	60	120	70x45x130	70x45x130
80	60	120	60	130	70x45x130	70x45x130
90	60	120	60	130	70x45x130	70x45x130
100	60	120	60	130	70x45x130	70x45x130

Dimensions (mm) (Dual)

(uF/ MFD)	Cylinder Case				Oval Case	
	370VAC		440/450VAC		370VAC	440/450VAC
	Φ	H	Φ	H	LxBxH	LxBxH
15 + 1.5	45	90	45	90	70x45x80	70x45x80
15 + 2.5	45	90	45	90	70x45x80	70x45x80
15 + 3	45	90	45	90	70x45x80	70x45x80
15 + 5	45	90	45	90	70x45x80	70x45x80
20 + 1.5	45	90	45	90	70x45x80	70x45x80
20 + 3	45	90	45	90	70x45x80	70x45x80
20 + 5	45	90	45	90	70x45x80	70x45x80
25 + 1.5	45	90	50	100	70x45x80	70x45x90
25 + 2.5	45	90	50	100	70x45x90	70x45x90
25 + 5	45	90	50	100	70x45x90	70x45x90
30 + 2	50	100	50	100	70x45x90	70x45x90
30 + 5	50	100	50	110	70x45x90	70x45x90
35 + 1.5	50	100	50	110	70x45x90	70x45x90
35 + 3	50	100	50	110	70x45x90	70x45x90
40 + 2	50	110	50	110	70x45x90	70x45x110
40 + 2.5	50	110	50	110	70x45x90	70x45x110
50 + 1.5	50	120	50	120	70x45x110	70x45x110
50 + 3	50	120	50	120	70x45x110	70x45x110
50 + 5	50	120	50	120	70x45x110	70x45x110
50 + 6	50	120	50	120	70x45x110	70x45x110
55 + 4	55	120	55	130	70x45x110	70x45x130
55 + 6	55	120	55	130	70x45x110	70x45x130
60 + 1.5	55	120	55	130	70x45x130	70x45x130
60 + 3	55	130	55	130	70x45x130	70x45x130
60 + 5	60	135	60	135	70x45x130	70x45x130
60 + 7.5	60	135	60	135	70x45x130	70x45x130
65 + 5	60	135	60	135	70x45x130	70x45x130
65 + 7.5	60	135	65	135	70x45x130	70x45x130
80 + 6	65	135	65	135	70x45x130	70x45x130
80 + 7.5	65	135	65	135	70x45x130	70x45x130

Starting Capacitor NJS Series



Construction

- Dielectric: polypropylene film.
- Plastic & Box can.
- Dry type.

Features

- Self-heating properties.
- Low dissipation factor.
- P0 safety class to IEC 60252-1.
- High insulation resistance.

Typical applications

- For general sine wave applications, mainly as motor starting capacitor.

Terminals

- Fast on
- Tinned Copper Wire

Technical data and specifications

Reference standards	IEC 60252-1
Safety class according IEC 60252-1	P0
Life expectancy to IEC 60252-1	3,000(C) ~ 10,000h(B)
Rated capacitance CR	0.5μF ~ 30μF (MFD)
Tolerance	± 5%
Rated voltage VR	110VAC ~ 630VAC
Rated frequency FR	50/60Hz
Maximum permissible votage Vmax	1.1 × VR (VR=Rated voltage)
Maximum permissible current Imax	1.3 × IR (IR=Rated current)
AC test voltage terminal to terminal VTT	2 × VR, 2s (routine test) 2 × VR, 60s (type test)
Dissipation factor tan δ	≤0.002 (50Hz)
Climate types	25/085/21 to IEC 60068-1

Dimensions (mm)

Capacitance (uF/MFD)	250-300Vac			450-500Vac		
	L	W	H	L	W	H
0.5	37	13	23	37	13	23
1	37	13	23	37	13	23
1.5	37	13	23	37	13	23
2	37	13	23	37	13	23
2.5	37	13	23	47	18	29
3	47	18	29	47	18	29
3.5	47	18	29	47	18	29
4	47	18	29	47	18	34
5	47	18	29	47	22	34
6	47	18	34	47	22	34
8	47	22	34	48	26	38
10	47	22	34	58	26	44
12	48	26	38	58	26	44
12.5	48	26	38	58	26	44
14	48	26	38	58	26	44
15	48	26	38	58	26	44
16	48	26	38	58	26	44
18	58	26	44	58	26	44
20	58	26	44	55	32	49
22	58	26	44	55	32	49
24	55	32	49	55	32	49
25	55	32	49	55	32	49
28	55	32	49	55	32	49
30	55	32	49	55	32	49

Lighting Capacitors - CBB80 Series



Construction

- Dielectric: polypropylene film
- Plastic & Aluminum can
- Dry type

Features

- Small volume, light, low loss, safety
- It has the character of endure the high temperature

Typical applications

- For lamps and lanterns and so on

Terminals

- Push-in Terminals
- Tinned Copper Wire

Mounting parts (optional)

- Threaded stud at bottom of can (M8, max. torque=5 Nm).
- Fast fixation for mounting into a hole of $\Phi 8$ mm.

Technical data and specifications

Reference standards	EN61048, EN61049, UL810
Safety class according IEC 60252-1	IP00
Life expectancy to IEC 60252-1	3,000(C) ~ 10,000h(B)
Rated capacitance CR	2 μ F ~ 60 μ F (MFD)
Tolerance	$\pm 5\%$
Rated voltage VR	110VAC ~ 630VAC
Rated frequency FR	50/60Hz
Test voltage terminal to terminal	2 x VR, 60s
V _{TT}	2 x Kv, 60s
Dissipation factor tan δ	$\text{tg}\delta \leq 0.10$, $\text{tg}\delta \leq 0.15$ (20°C, 100Hz)
Climate types	-40°C ~ +105°C

Dimensions (mm)

Capacitance (uF/MFD)	250-450Vac	
	Metal or Plastic case	
	Φ	H
2	35	60
3	35	60
4	35	60
6	35	60
8	35	60
9	35	70
10	35	70
12	40	70
14	40	70
15	40	90
16	40	90
18	40	90
20	40	90
21.5	40	90
22	40	90
24	40	90
25	40	90
30	40	90
31.5	45	90
32	45	90
35	45	90
40	45	90
50	50	90
55	50	90

AC Motor Start Capacitor - CD60 US Type Series



Construction

- Dielectric: aluminium foil & electrolyte paper
- Bakelite plastic can

Features

- High class insulating
- High strength
- Uneasy broken
- Reliable and long in service life

Typical applications

- Suitable for use in single phase A.C. motors

Terminals

- Double Fast on
- Cable

Technical data and specifications

Reference standards	American ANSI /EIA -463
Rated capacitance CR	21μF ~ 1536μF (MFD)
Tolerance	0 ~ +20%
Rated voltage VR	110VAC ~ 330VAC
Rated frequency FR	50/60Hz
Surge Voltage between lugs	Applying 1.25 times rated voltage for 2 seconds
Surge Voltage between lug and case	2000VAC 10 seconds non-broken down
Load Life	According to the difference working voltage and capacitance; Alternation 0.5-4 minute turn on 1 time for second, 12500~50000 times.
Dissipation factor tan δ	tgδ ≤ 0.10, tgδ ≤ 0.15 (20°C,100Hz)
Climate types	-40°C ~ +65°C

Dimensions (mm)		110VAC		125VAC		165VAC	
Capacitance (uF/MFD)		Φ	H	Φ	H	Φ	H
21 - 25		36.5	69.85	36.5	69.85	36.5	69.85
25 - 30		36.5	69.85	36.5	69.85	36.5	69.85
30 - 36		36.5	69.85	36.5	69.85	36.5	69.85
36 - 43		36.5	69.85	36.5	69.85	36.5	69.85
43 - 52		36.5	69.85	36.5	69.85	36.5	69.85
47 - 56		36.5	69.85	36.5	69.85	36.5	69.85
53 - 64		36.5	69.85	36.5	69.85	36.5	69.85
64 - 77		36.5	69.85	36.5	69.85	36.5	69.85
72 - 86		36.5	69.85	36.5	69.85	36.5	69.85
88 - 106		36.5	69.85	36.5	69.85	36.5	85.72
108 - 130		36.5	69.85	36.5	69.85	36.5	85.72
124 - 149		36.5	69.85	36.5	69.85	36.5	85.72
130 - 156		36.5	69.85	36.5	69.85	46.02	85.72
145 - 174		36.5	69.85	36.5	69.85	46.02	85.72
161 - 193		36.5	69.85	36.5	69.85	46.02	85.72
189 - 227		36.5	69.85	36.5	85.72	46.02	85.72
216 - 227		36.5	85.72	36.5	85.72	46.02	111.12
233 - 280		36.5	85.72	36.5	85.72	46.02	111.12
243 - 292		36.5	85.72	36.5	111.12	46.02	111.12
270 - 324		36.5	85.72	36.5	111.12	46.02	111.12
324 - 389		36.5	111.12	46.02	85.72	52.37	111.12
340 - 408		46.02	85.72	46.02	85.72	52.37	111.12
378 - 454		46.02	85.72	46.02	85.72	52.37	111.12
400 - 480		46.02	85.72	46.02	85.72	52.37	111.12
430 - 516		46.02	85.72	46.02	85.72	65.5	111.12
460 - 552		46.02	85.72	46.02	85.72	65.5	111.12
540 - 648		46.02	111.12	46.02	111.12	65.5	111.12
590 - 708		46.02	111.12	46.02	111.12	65.5	111.12
645 - 774		52.37	111.12	52.37	111.12	65.5	111.12
708 - 850		52.37	111.12	52.37	111.12	65.5	111.12
720 - 864		52.37	111.12	52.37	111.12	65.5	111.12
800 - 960		52.37	111.12	52.37	111.12	65.5	111.12
815 - 978		52.37	111.12	65.5	111.12	65.5	111.12
829 - 995		65.5	111.12	65.5	111.12	65.5	111.12
850 - 1020		65.5	111.12	65.5	111.12	65.5	111.12
1000 - 1200		65.5	111.12	65.5	111.12		
1020 - 1224		65.5	111.12	65.5	111.12		
1175 - 1410		65.5	111.12	65.5	111.12		
1280 - 1536		65.5	111.12				

Dimensions (mm)		220VAC		250VAC		330VAC	
Capacitance (uF/MFD)		Φ	H	Φ	H	Φ	H
21 - 25		36.5	69.85	36.5	69.85	36.5	85.72
25 - 30		36.5	69.85	36.5	69.85	36.5	85.72
30 - 36		36.5	69.85	36.5	85.72	46.02	85.72
36 - 43		36.5	69.85	36.5	85.72	46.02	85.72
43 - 52		36.5	85.72	36.5	85.72	46.02	85.72
47 - 56		36.5	85.72	36.5	85.72	46.02	85.72
53 - 64		36.5	85.72	46.02	85.72	46.02	111.12
64 - 77		46.02	85.72	46.02	85.72	46.02	111.12
72 - 86		46.02	85.72	46.02	85.72	46.02	111.12
88 - 106		46.02	85.72	46.02	111.12	52.37	111.12
108 - 130		46.02	85.72	46.02	111.12	65.5	111.12
124 - 149		46.02	111.12	46.02	111.12	65.5	111.12
130 - 156		46.02	111.12	46.02	111.12	65.5	111.12
145 - 174		52.37	111.12	52.37	111.12	65.5	111.12
161 - 193		52.37	111.12	52.37	111.12	65.5	111.12
189 - 227		52.37	111.12	65.5	111.12	65.5	111.12
216 - 227		65.5	111.12	65.5	111.12	65.5	111.12
233 - 280		65.5	111.12	65.5	111.12	65.5	111.12
243 - 292		65.5	111.12	65.5	111.12	65.5	111.12
270 - 324		65.5	111.12	65.5	111.12	65.5	111.12
324 - 389		65.5	111.12	65.5	111.12		
340 - 408		65.5	111.12	65.5	111.12		
378 - 454		65.5	111.12	65.5	111.12		
400 - 480		65.5	111.12	65.5	111.12		
430 - 516		65.5	111.12	65.5	111.12		
460 - 552							
540 - 648							
590 - 708							
645 - 774							
708 - 850							
720 - 864							
800 - 960							
815 - 978							
829 - 995							
850 - 1020							
1000 - 1200							
1020 - 1224							
1175 - 1410							
1280 - 1536							

AC Motor Start Capacitor - CD60 Series



Construction

- Dielectric: aluminium foil & electrolyte paper
- Aluminum can

Features

- High class insulating
- High strength
- Uneasy broken
- Reliable and long in service life

Typical applications

- Suitable for use in single phase A.C. motors

Terminals

- Screw Fast on
- Single Fast on
- Double Fast on
- Wires & Cable

Technical data and specifications

Rated capacitance CR	21μF ~ 1600μF (MFD)
Tolerance	0 ~ +20%
Rated voltage VR	110VAC ~ 330VAC
Rated frequency FR	50/60Hz
Surge Voltage between lugs	Applying 1.2 times rated voltage for 2 seconds
Surge Voltage between lug and case	2000VAC 10 seconds non-broken down
Load Life	55°C, 110 ~ 165VAC, 1S on, 59S off, 30000 times; 55°C, 220 ~ 330VAC, 1S on, 59S off, 15000 times; Capacitance change rate: ±15% Initial tested value; Dissipation Factor tgδ: ≤0.20
Dissipation factor tan δ	tgδ ≤ 0.10, tgδ ≤ 0.15 (20°C, 100Hz)
Climate types	-40°C ~ +55°C

Dimensions (mm)

Capacitance (uF/MFD)	110VAC		125VAC		165VAC	
	Φ	H	Φ	H	Φ	H
50	34	50	34	60	34	60
75	34	60	34	60	34	60
100	34	80	34	80	34	80
125	34	80	34	80	42	80
150	34	80	34	80	42	80
200	34	80	34	80	42	80
250	34	80	34	80	45	90
300	42	80	42	80	45	90
350	42	80	42	80	50	95
400	45	90	45	90	50	95
450	45	90	50	95	50	95
500	45	90	50	95	50	95
600	50	95	50	95	50	95
700	50	100	50	100	55	100
800	50	100	50	100	55	100
1000	55	100	55	100	60	100
1200	55	100	60	100	60	120
1400	60	100	60	120	65	120
1600	65	120	65	120		

Dimensions (mm)

uF/MFD	220VAC		250VAC		300VAC		330VAC	
	Φ	H	Φ	H	Φ	H	Φ	H
50	34	80	34	80	34	80	42	80
75	34	80	34	80	42	80	42	80
100	34	80	42	80	50	95	50	95
125	50	95	50	95	50	95	50	95
150	50	95	50	95	50	100	50	100
200	50	95	50	95	50	100	55	100
250	50	95	50	95	55	100	55	100
300	50	95	50	100	55	100	55	100
350	50	95	50	100	55	100	60	100
400	50	100	55	100	60	100	60	100
450	50	100	55	100	60	100	65	120
500	55	100	55	100	65	120	65	120
600	55	100	60	100	65	120	65	120
700	55	100	60	100	65	120		
800	60	120	65	120				
1000	65	120	65	120				
1200	65	120						
1400								
1600								

Relay Capacitor Overload - RCO Series

Feature & Application

- Adopting PTC component, supplying high torque, and long operating life.
- Round Bakelite/ABS phenolic compression sealed case with ABS cover, triplicate wires connect terminal, anti moisture, anti vibration, high strength and good insulation.
- Apply to 1/12~1/2HP 50Hz/60Hz single-phase AC motors for starting, it is widely used for refrigerators, air conditioner etc.

Temperature Range: -20°C ~ +65°C, Volatge Rating: 115VAC

Model	Power (HP)	D1±1mm	D2±1mm	D3±1mm	H±2mm
RCO810	1/12~1/8HP	37	45	46	115
RCO610	1/6~1/5HP	37	45	46	130
RCO410	1/3~1/4HP	37	45	46	130
RCO210	1/2HP	37	45	46	130

Temperature Range: -20°C ~ +65°C, Volatge Rating: 230VAC

Model	Power (HP)	D1±1mm	D2±1mm	D3±1mm	H±2mm
RCO820	1/12~1/8HP	37	45	46	115
RCO620	1/6~1/5HP	37	45	46	130
RCO420	1/3~1/4HP	37	45	46	130
RCO220	1/2HP	37	45	46	130



Hard Start Kit - SPP Series



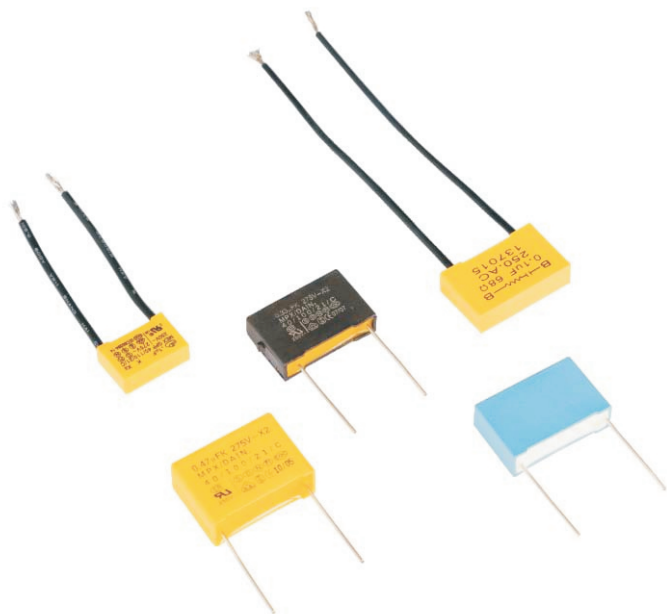
Feature & Application

- SPP motor torque multiplier is comprised of motor start capacitor and PTC thermistor or relay in series.
- Hard Start Kit has the characters, such as high reliability, long life time. And it can start compressor and heighten torque at low voltage.
- It applies to refrigeration compressor, heating pump and often starting motor with frequency 50Hz to 60Hz, rated voltage 110VAC to 330VAC for starting function.

Technical data and specifications

Part No.	Voltage (VAC)	HP	Capacitance (uF/MFD)
SPP4A	90 - 130	1/8 - 1	88 - 106
SPP5B	90 - 227	1/3 - 2	43 - 52
SPP6B	90 - 227	1/2 - 3	88 - 106
SPP7B	90 - 227	1 - 4	130 - 156
SPP7C	90 - 227	2 - 5	130 - 156uF / 330VAC
SPP8B	90 - 227	1 - 5	145 - 174
SPP8C	90 - 227	2 - 6	145 - 174 / 330VAC

Metallized Polypropylene Film Capacitor - X2



Feature & Application

- Box type provides the identical outer appearance
- Very low loss at high frequency, suitable for high current.
- High insulation resistance, long life due to self-healing effect.
- Withstanding 2.5Kv impulse voltage, Class X2
- As an across-the-line type noise suppression capacitor, and suitable for AC purpose

Configuration

- Non-inductive, wound with metallized polypropylene film as the dielectric and delectrode, with copper-clad steel leads and encapsulated in a plastic case sealed with epoxy resin.

Technical data and specifications

Reference Standard GB/T14472-1998 (IEC 60384-14)

Climatic Category 40/100/21

Rated Voltage 275/280VAC

Capacitance Range 0.0022-4.7uF

Capacitance Tolerance $\pm 5\%(J)$, $\pm 10\%(K)$, $\pm 20\%(M)$

Voltage Proof $4.3U_R(5s)$

Dissipation Factor $\leq 0.15\%$ $CR \leq 1.0uF$
 $\leq 0.3\%$ $CR > 1.0uF(20^\circ C, 1KHz)$

Insulation Resistance ($20^\circ C, 1min$) $\geq 30000M\Omega$ ($CR \leq 0.33uF$)
 $\geq 10000s$ ($CR > 0.33uF$)

Dimensions(mm)

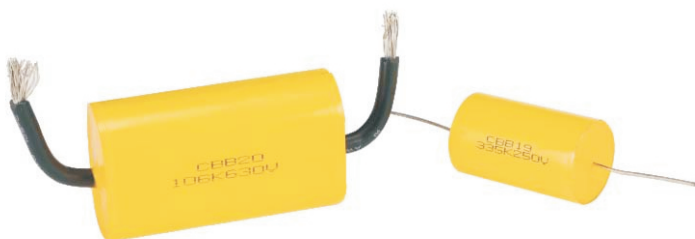
R.V. uF	W(mm)	T(mm)	H(mm)	P(mm)	d (mm)
0.0022	13	4	9	10	0.6
0.0027	13	4	9	10	0.6
0.0033	13	4	9	10	0.6
0.0039	13	4	9	10	0.6
0.0047	13	4	9	10	0.6
0.0056	13	5	11	10	0.6
0.0068	13	5	11	10	0.6
0.0082	13	5	11	10	0.6
0.01	13	5	11	10	0.6
0.012	13	5	11	10	0.6
0.015	13	5	11	10	0.6
0.018	13	5	11	10	0.6
0.022	13	5	11	10	0.6
0.027	13	5	11	10	0.6
0.033	13	5	11	10	0.6
0.039	13	6	12	10	0.6
0.047	13	6	12	10	0.6
0.047	18	5	11	15	0.8
0.056	13	6	12	10	0.6
0.056	18	5	11	15	0.8
0.068	13	6	12	10	0.6
0.068	18	5	11	15	0.8
0.082	13	6	12	10	0.6
0.082	18	5.2	11.5	15	0.8
0.1	13	6	12	10	0.6
0.1	18	6	12	15	0.8
0.12	18	6.3	13	15	0.8
0.15	18	7.5	13	15	0.8
0.15	26.5	6	15	22.5	0.8
0.18	18	8.5	14.5	15	0.8

Dimensions(mm)

R.V. uF	W(mm)	T(mm)	H(mm)	P(mm)	d (mm)
0.18	26.5		15	22.5	0.8
0.22	18	8.5	14.5	15	0.8
0.22	26.5	7	16.5	22.5	0.8
0.27	26.5	8.5	16.5	22.5	0.8
0.33	18	8.5	14.5	15	0.8
0.33	26.5	7	16.5	22.5	0.8
0.39	18	9.5	15.5	15	0.8
0.39	26.5	10	20	22.5	0.8
0.47	18	10	16	15	0.8
0.47	26.5	10	20	22.5	0.8
0.56	26.5	11	20	22.5	0.8
0.56	32	11	20	27.5	0.8
0.68	26.5	11	20	22.5	0.8
0.68	32	11	20	27.5	0.8
0.82	26.5	12	21.5	22.5	0.8
0.82	32	13	22	27.5	0.8
1	32	13	22	27.5	0.8
1	37	13.5	25	31.5	0.8
1.5	32	13	22	27.5	0.8
1.5	37	17	26.5	31.5	0.8
1.8	37	19	29	31.5	0.8
2	31	22	31	27.5	0.8
2	38	18	28	31.5	0.8
2.2	31	22	31	27.5	0.8
2.2	38	19	29	31.5	0.8
2.5	38	20	30	31.5	0.8
3	38	20	30	31.5	0.8
3.3	38	21.7	31.3	31.5	0.8
4	48	30	30	41.5	0.8
4.7	48	30	30	41.5	0.8

Metallized Polypropylene Film Capacitor

Axial Type - CBB20 / CBB19



Construction

- Dielectric: polypropylene film, PP
- Cylindrical winding & Cylindrical flat
- Insulating sleeve
- Face ends sealed with epoxy resin

Features

- Good self-healing properties
- Down-leads axially and horizontally.
- Very low loss at high frequency, suitable for high current.
- High insulation resistance, long life due to self-healing effect.
- Widely used in high frequency, DC, AC and pulse circuits.

Terminals

- Axial leads, lead-free tinned
- Axial leads, insulated, tinned copper wires gathered together by a tin cover (fray)

Configuration

Non-inductive, wound with metallized polypropylene film as dielectric and electrode and copper-clad steel leads or flexible cord, outer resin wrapped of polypropylene and end sealed with epoxy.

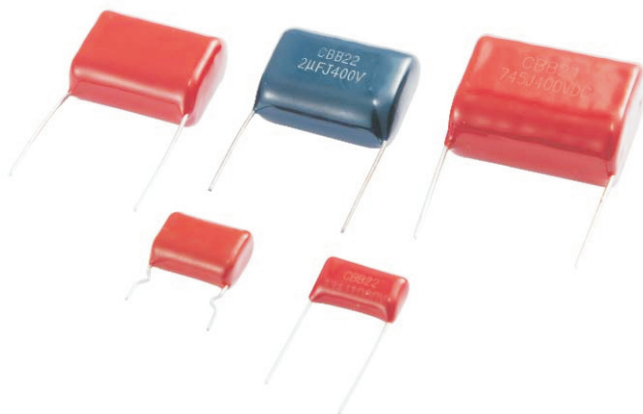
Technical data and specifications

Reference Standard	GB 10190-88(IEC 60384-16)
Climatic Category	40/85/21
Rated Voltage	160V, 250V, 400V, 630V, 1000V, 1200V
Capacitance Range	±5%(J), ±10%(K), ±20%(M)
Capacitance Tolerance	1.6U _R (5s)
Voltage Proof	≤0.1% (20°C, 1KHz)
Dissipation Factor	≤0.15% CR≤1.0uF ≤0.3% CR>1.0uF(20°C, 1KHz)
Insulation Resistance (20°C, 1min)	≥25000MΩ (CR≤0.33uF) ≥7500s (CR>0.33uF)

Dimensions(mm)						
R.V.	250VDC		400VDC		630VDC	
uF	L	D	L	D	L	D
	Max	Max	Max	Max	Max	Max
0.01					14	7
0.015					14	7
0.022					14	8
0.033			14	8	19	8
0.047			14	8	19	9
0.068			19	8	19	11
0.1	14	8	19	9	27	11
0.15	19	8	19	10	27	13
0.22	19	9	27	10	33	13
0.33	19	11	27	12	33	16
0.47	25	11	27	13	33	18
0.68	25	13	33	15	33	20
1	25	13	33	17	38	21
1.5	33	15	33	21	44	22
2.2	33	17	38	22	44	27
3.3	33	19	44	26		
4.7	38	21				
6.8	44	23				
10	44	26				

Dimensions(mm)									
R.V.	250VDC			400VDC			630VDC		
uF	W	H	T	W	H	T	W	H	T
	Max	Max	Max	Max	Max	Max	Max	Max	Max
0.01									
0.015							14	10	6
0.022							14	10	6
0.033							19	12	7
0.047				14	12	7	19	13	8
0.068				19	12	7	19	14	9
0.1	14	12	7	19	12	8	27	13	8
0.15	19	11	6	19	15	9	27	16	9
0.22	19	11	7	27	15	8	33	17	11
0.33	19	13	8	27	16	10	33	20	13
0.47	27	15	9	33	16	10	33	23	15
0.68	27	16	10	33	18	11	38	25	16
1	33	18	10	33	21	14	44	32	17
1.5	33	20	13	33	24	16	44	37	21
2.2	33	20	14	38	30	15	44	38	23
3.3	33	24	16	44	38	18			
4.7	38	25	16						
6.8	44	32	16						
10	44	38	18						

Metallized Polypropylene Film Capacitor - CBB21 / CBB22



Features

- Very low loss at high frequency, and suitable for high current.
- High insulation resistance, long life due to self-healing effect.
- Widely used in high frequency, DC, AC and pulse circuits.

Configuration

- Non-inductive, wound with metallized polypropylene film as dielectric and electrode with copper-clad steel leads and epoxy resin coating.

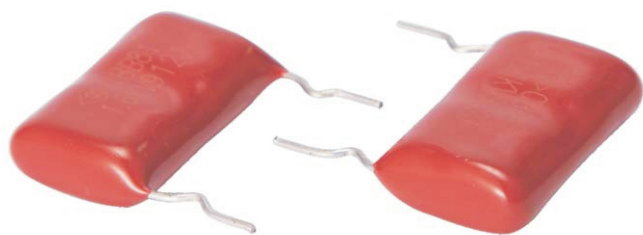
Technical data and specifications

Reference Standard	GB 10190-88(IEC 60384-16)
Climatic Category	40/85/21
Rated Voltage	100V, 160V, 250V, 400V, 630V
Capacitance Range	0.0047-4.7uF
Capacitance Tolerance	±5%(J), ±10%(K), ±20%(M)
Voltage Proof	1.6U _R (5s)
Dissipation Factor	≤0.1% (20°C, 1KHz)
Insulation Resistance (20°C, 1min)	≥25000MΩ (CR≤0.33uF) ≥7500s (CR>0.33uF)

Dimensions(mm)								
R.V.	250VDC				400VDC			
uF	W	T	H	P	W	T	H	P
0.0047	12	4	8.5	10	12	4	8.5	10
0.0056	12	4	8.5	10	12	4	8.5	10
0.0068	12	4.2	8.5	10	12	4.2	8.5	10
0.0082	12	4.2	9.5	10	12	4.2	9.5	10
0.01	12	4.8	9.5	10	12	4.8	9.5	10
0.012	12	5	9.5	10	12	5	9.5	10
0.015	12	5	9.5	10	12	5	9.6	10
0.016	12	5	9.5	10	12	5	9.6	10
0.022	12	5	9.8	10	12	5	9.8	10
0.027	12	5	10	10	12	5	10	10
0.033	12	5.5	10	10	12	5.5	10.6	10
0.039	12	5.5	10	10	12	5.5	10.6	10
0.047	12	5.5	10	10	12	5.5	10.8	10
0.056	12	5.5	10.5	10	12	5.5	11	10
0.068	12	5.7	11	10	12	5.7	11	10
0.082	12	6.3	11.5	10	12	6.3	11.5	10
0.1	12	7	12	10	12	7	12	10
0.15	17	6	11	15	17	6	11	15
0.18	17	6	11.6	15	17	6.5	11.6	15
0.22	17	6	11.2	15	17	6.8	13.3	15
0.27	17	6	12.8	15	17	7.5	14.3	15
0.33	17	6.8	13.5	15	17	8.3	14.7	15
0.39	17	6.8	13.5	15	17	8.8	15.4	15
0.47	22.5	6.8	13.6	20	22.5	8.8	15.5	20
0.56	22.5	7.5	14.3	20	22.5	9	15.5	20
0.68	22.5	8.3	15.2	20	22.5	10	17	20
0.82	22.5	9	16	20	22.5	10.2	18.5	20
1	22.5	10	17	20	22.5	11.3	19.5	20
1.2	22.5	10.5	19	20	22.5	12.5	20.6	20
1.5	22.5	11	19	20	28.5	13.2	20.7	26
1.8	28.5	11	19.5	26	28.5	13.5	22	26
2.2	28.5	12.2	20.7	26	33.5	13.5	22	31
3.3	33.5	13	23	31	33.5	15.3	25	31
4.7	33.5	15.6	25	31	33.5	17.5	27.3	31

Dimensions(mm)				
R.V.	630VDC			
uF	W	T	H	P
0.0047	12	4	8.5	10
0.0056	12	4	8.5	10
0.0068	12	4.2	8.5	10
0.0082	12	4.2	9.5	10
0.01	12	4.8	10	10
0.012	12	5	10	10
0.015	12	5	10	10
0.016	12	5	10	10
0.022	12	5	10	10
0.027	12	5	10.2	10
0.033	12	5.5	10.6	10
0.039	12	6	11.2	10
0.047	12	6.5	11.8	10
0.056	12	6.5	12.3	10
0.068	17	6.5	12.3	15
0.082	17	6.5	12.3	15
0.1	17	6.5	12.8	15
0.15	17	7.4	14	15
0.18	17	8.2	14	15
0.22	22.5	7.2	14	20
0.27	22.5	8.3	15.2	20
0.33	22.5	9	15.6	20
0.39	22.5	9.5	16.8	20
0.47	22.5	10.2	18.5	20
0.56	22.5	11	19.4	20
0.68	22.5	12.4	20.6	20
0.82	22.5	13.2	21.7	20
1	28.5	13.8	22.3	26
1.2	28.5	14.2	22.8	26
1.5	33.5	14.8	23.5	31
1.8	33.5	15.8	24	31
2.2	33.5	17.5	27.7	31
3.3	33.5	21.8	32	31
4.7	43.5	22.3	32.5	41

High Voltage Polypropylene Film Capacitor - CBB81



Features

- Very low loss at high frequency, and suitable for high current.
- Excellent frequency and temperature characteristics.
- High insulation resistance, long life due to self-healing effect.
- Widely used in high frequency, DC, AC and pulse circuits.

Configuration

- Non-inductive, wound with metallized polypropylene film as dielectric and electrode with copper-clad steel leads and epoxy resin coating.

Technical data and specifications

Reference Standard	GB10188-88(IEC60384-13)
Climatic Category	40/85/21
Rated Voltage	800V, 1000V, 1200V, 1600V, 2000V
Capacitance Range	0.001-0.47uF
Capacitance Tolerance	±5%(J), ±10%(K)
Voltage Proof	2.0U _R (5s)
Dissipation Factor	≤0.08% (20°C, 10KHz)
Insulation Resistance (20°C, 1min)	≥30000MΩ (CR≤0.1uF) ≥3000s (CR>0.1uF)

Dimensions(mm)								
R.V.	800VDC				1000VDC			
uF	W±1	T±1	H±1	P±1.5	W±1	T±1	H±1	P±1.5
0.001	18	6	11	15	18	6	11.5	15
0.0012	18	6	11	15	18	6	11.5	15
0.0015	18	6	11	15	18	6	11.5	15
0.0018	18	6	11	15	18	6	11.5	15
0.0022	18	6	11	15	18	6	11.5	15
0.0027	18	6	11	15	18	6	11.5	15
0.0033	18	6	11	15	18.5	6	12	15
0.0039	18.5	6	11	15	18.5	6	12	15
0.0047	18.5	6	11	15	18.5	6	12	15
0.0056	18.5	6	11	15	19	6	12	15
0.0068	18.5	6	11	15	19	7	13	15
0.0082	19	7	11	15	19	8	13	15
0.01	19	6	12	15	19	8	14	15
0.012	19	7	12	15	19	9	15	15
0.015	19	7	13	15	18	10	16	15
0.018	19	8	14	15	24	9	16	15
0.022	19	9	15	15	24	10	17	20
0.027	19	10	16	15	24	11	18	20
0.033	19	11	17	15	24	12	19	20
0.039	19	12	18	15	24	13	20	20
0.047	24	10	18	20				
0.056	24	11	19	20				
0.068	24	12	20	20				
0.082	24	14	21	20				
0.1	24	15	23	20				

Dimensions(mm)								
R.V.	1200VDC				1600VDC			
uF	W±1	T±1	H±1	P±1.5	W±1	T±1	H±1	P±1.5
0.001	18.5	6	12	15	19	5	10	15
0.0012	18.5	6	12	15	19	5	11	15
0.0015	18.5	6	12	15	19	6	11	15
0.0018	18.5	6	12	15	19	6	12	15
0.0022	19	6	12	15	19	6	12	15
0.0027	19	6	12	15	19	7	13	15
0.0033	19	7	13	15	19	8	13	15
0.0039	19	8	13	15	19	8	14	15
0.0047	19	8	14	15	19	9	15	15
0.0056	19	9	15	15	19	10	16	15
0.0068	24	10	16	15	24	11	17	15
0.0082	24	8	15	20	24	9	16	20
0.01	24	9	16	20	24	10	17	20
0.012	24	10	17	20	24	11	18	20
0.015	24	11	18	20	24	12	19	20
0.018	24	12	19	20	24	13	20	20
0.022	24	13	20	20	24	13	21	20
0.027								
0.033								
0.039								
0.047								
0.056								
0.068								
0.082								
0.1								

BSMJ Series Self-healing Low Voltage Shunt Power Capacitor

Applicable

- BSMJ series self-healing low voltage shunt power capacitor is applied to improve the power factor of circuit by the parallel connection with AC electric power system with rated voltage lower than 1000V and 50/60Hz.

Environmental conditions of installation

- Temperature range: -25°C/50°C
- Altitude: ≤2000m
- When temperature is 35°C, humidity should be ≤90%
- There is no harmful gases, no electrical conductivity or explosive dust, or violent vibration in the installation place.
- There should be 30mm gap at least if two sets capacitor need to be installed together. Cooling measures should be taken in hot summer.

Main technical data

- Rating Voltage: 0.23 ~ 11.14kV
 - Rating capacitance: 1 ~ 60kvar
 - Rating frequency: 50Hz/60Hz
 - Tolerance: -2 ~ +5%
 - Active loss: ≤1.2W/kvar
 - T-T Voltage: 2.15Un 10s
 - Max permissible overvoltage: 1.1Un.
 - Max permissible overcurrent: 1.3In.
 - Self-discharge character: Residual voltage from Un to 50V or below with 3 minutes after capacitor power off.
- Executive standard: GB/T12747-2004, IEC 60831-2002

Notes of installation and running

- Installation and maintenance should be performed by aqualified personnel.
- Must cut off power before running.
- Interval between disconnect and next operation should be more than 3 minutes, use a insulation wire to capacitor before touching capacitor.
- More than 30mm gap should be maintained between capacitors, inner capacitor cabinet should be reserved

Main models and specifications

- Single phase products installation dimensions are same as three phases products if their specifications are same.
- We can supply you other special specification products.



Dimensions(mm)							
No.	MODEL	Rating Voltage (KV)	Rating Volume (kvar)	Rating Frequency (Hz)	Rating Capacity (uF)	Rating Current (A)	Shell Outer Height (mm)
1	BSMJ0.25-5-3YN	0.25	5	50	254.6	11.5	130
2	BSMJ0.25-10-3YN	0.25	10	50	509.3	23.1	185
3	BSMJ0.25-15-3YN	0.25	15	50	763.9	34.6	240
4	BSMJ0.25-20-3YN	0.25	20	50	1018.6	46.2	270
5	BSMJ0.25-25-3YN	0.25	25	50	1273.2	57.7	270
6	BSMJ0.25-30-3YN	0.25	30	50	1527.9	69.3	200
7	BSMJ0.4-3-3	0.4	3	50	59.7	4.3	130
8	BSMJ0.4-5-3	0.4	5	50	99.5	7.2	130
9	BSMJ0.4-10-3	0.4	10	50	198.9	14.3	130
10	BSMJ0.4-15-3	0.4	15	50	298.4	21.6	185
11	BSMJ0.4-20-3	0.4	20	50	397.9	28.9	220
12	BSMJ0.4-25-3	0.4	25	50	497.4	36.1	240
13	BSMJ0.4-30-3	0.4	30	50	596.8	43.3	270
14	BSMJ0.4-40-3	0.4	40	50	795.8	57.5	240
15	BSMJ0.4-50-3	0.4	50	50	994.7	72.2	240
16	BSMJ0.4-60-3	0.4	60	50	1193.6	86.6	270
17	BSMJ0.45-3-3	0.45	3	50	47.2	3.8	130
18	BSMJ0.45-5-3	0.45	5	50	78.6	6.4	130
19	BSMJ0.45-10-3	0.45	10	50	157.2	12.8	130
20	BSMJ0.45-12-3	0.45	12	50	188.6	15.4	185
21	BSMJ0.45-14-3	0.45	14	50	220.1	18.0	185
22	BSMJ0.45-15-3	0.45	15	50	235.8	19.2	185
23	BSMJ0.45-20-3	0.45	20	50	314.4	25.7	220
24	BSMJ0.45-25-3	0.45	25	50	393.0	32.1	240
25	BSMJ0.45-30-3	0.45	30	50	471.6	38.5	240
26	BSMJ0.45-40-3	0.45	40	50	628.8	51.3	270
27	BSMJ0.45-50-3	0.45	50	50	786.0	64.2	200
28	BSMJ0.45-60-3	0.45	60	50	943.1	77.0	270
29	BSMJ0.525-5-3	0.525	5	50	57.7	5.5	130
30	BSMJ0.525-10-3	0.525	10	50	115.5	11.0	185
31	BSMJ0.525-15-3	0.525	15	50	173.2	16.5	220
32	BSMJ0.525-20-3	0.525	20	50	231.0	22.0	240
33	BSMJ0.525-25-3	0.525	25	50	288.7	27.5	240
34	BSMJ0.525-30-3	0.525	30	50	346.5	33.0	270
35	BSMJ0.525-40-3	0.525	40	50	462.0	44.0	200
36	BSMJ0.69-5-3	0.69	5	50	33.4	4.2	130
37	BSMJ0.69-10-3	0.69	10	50	66.9	8.4	130
38	BSMJ0.69-15-3	0.69	15	50	100.3	12.6	185
39	BSMJ0.69-20-3	0.69	20	50	133.7	16.7	220
40	BSMJ0.69-25-3	0.69	25	50	167.2	20.9	240
41	BSMJ0.69-30-3	0.69	30	50	200.6	25.1	270
42	BSMJ0.69-40-3	0.69	40	50	267.4	33.5	200



Self-Healing Low Voltage Shunt Power Capacitor (Cylinder-shape)

Applicable

- BSMJ series self-healing low voltage shunt power capacitor is applied to improve the power factor of circuit by the parallel connection with AC electric power system with rated voltage lower than 1000V and 50/60Hz.

Environmental conditions of installation

- Temperature rage: -25°C/50°C
- Altitude: $\leq 2000\text{m}$
- When temperature is 35°C, humidity should be $\leq 90\%$
- There is no harmful gases, no electrical conductivity or explosive dust, or violent vibration in the installation place.
- There should be 30mm gap at least if two sets capacitor need to be installed together. Cooling measures should be taken in hot summer.

Product Feature

- Small volume, light weight
- Low loss: active loss $\leq 1.2\text{W/kvar}$
- Excellent self-healing property: Rapidly self-healing after midum dielectric breakdown by over-voltage or over-current, recovered to normal work.
- Good Safety performance: Discharge resitor and over-pressure protection device inside capacitor
- No leaking

Technical data and specifications

Rating Voltage	0.23 ~ 11.14kv
Rating capacitance	1 ~ 60kvar
Rating frequence	50Hz/60Hz
Tolerance	-2 ~ +5%
Active loss	$\leq 1.2\text{W/kvar}$
T-T Voltage	2.15Un 10s
Max permissible overvoltage	1.1Un
Max permissible overcurrent	1.3In
Self-discharge character	Residual voltage from Un to 50V or below with 3 minutes after capacitor power off.
Executive standard	GB/T12747-2004 , IEC 60831-2002



Installation and operation Attention

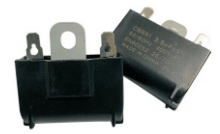
- Installation and maintenance should be performed by a qualified personnel.
- Must cut off power before running.
- Interval between disconnect and next operation should be more than 3 minutes, use a insulation wire to discharge two poles of capacitor before touching capacitor.breakdown by over-voltage or over-current, recovered to normal work.
- More than 30mm gap should be maintained between capacitors, inner capacitor cabinet should be reserved enough ventilation space and should be installed in a wee-ventilated placetion device inside capacitor

Main models and specifications

- Single phase products installation dimensions are same as three phases products if their specifications are same.
- We can supply you other special specification products.

Dimensions(mm)				
No.	Model	Out Diameter (mm)	Out Height (mm)	Stem
1	BSMJ0.4-10-3	76	245	M12
2	BSMJ0.4-15-3	86	245	M12
3	BSMJ0.4-20-3	86	290	M12
4	BSMJ0.4-25-3	116	245	M16
5	BSMJ0.4-30-3	116	290	M16
6	BSMJ0.45-10-3	76	245	M12
7	BSMJ0.45-15-3	76	245	M12
8	BSMJ0.45-20-3	86	245	M12
9	BSMJ0.45-25-3	116	245	M16
10	BSMJ0.45-30-3	116	290	M16







Contact Information

- 📍 ROOM 801, BUILDING 11, ROSE HOME,
LIANDU, LISHUI, ZHEJIANG
- ☎ +86-139-5708-3636 (WhatsApp or WeChat)
- ☎ +86-578-2129252
- ✉ sales@topo-capacitor.com
- 💻 +86-578-2121872
- 🌐 www.topocapacitor.com