

Datasheet

Metallized polypropylene film AC motor capacitor



RS Product List:



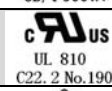

Item	Description
843-2014	Motor cap 4uF 450Vac AMP187
843-2020	Motor cap 2.5uF 350V tinned wire 3.8mm
843-2023	Motor cap 3uF 450V tinned wire 4.0mm
843-2026	Motor cap 2.5uF 350V tinned wire 4.0mm
843-2032	Motor cap 1.5uF 450V AMP187
843-2036	Motor cap 4uF 450V tinned wire 4.0mm
843-2039	Motor cap 2uF 450V tinned wire 3.5mm
843-2042	Motor cap 2.2uF 350V tinned wire 5.0mm
843-2045	Motor cap 1.2uF 450V tinned wire 3.5mm
843-2048	Motor cap 4uF 250V tinned wire 4.3mm
843-2051	Motor cap 2uF 450V tinned wire 5.0mm
843-2054	Motor cap 4uF 250V tinned wire 30mm



Specifications:

Reference Standard		GB/T 3667.1 (IEC 60252-1)			
Rated Voltage		500Vac (50/60Hz)	450Vac (50/60Hz)	300/350Vac (50/60Hz)	250Vac (50/60Hz)
Class of operation		Class C (Class B for 450Vac)	Class C	Class C	Class C
Capacitance Range		0.1μF~9.5μF	0.1μF~9.5μF	0.5μF~20μF	0.5μF~20μF
Class of safety protection		P0 (Indicates that the capacitor type has no specific failure protection.)			
Climatic Category		40/70/21 or 40/85/21			
Capacitance Tolerance		±5 %, ±10 %, ±15%			
Voltage Proof	Between Terminals	1000Vac(2s)	900Vac(2s)	600Vac/700Vac(2s)	500Vac(2s)
	Between Terminals And Case	2 000Vac(60s)			
Maximum permissible voltage		1.1U _N			
Maximum permissible current		1.3I _N			
Insulation Resistance (IR× C _N)		≥3 000s (20 \square ,100V,1min)			
Dissipation Factor		≤0.0020 (1kHz , 20 \square)			

Marking Introduction :

Sign	Explain	Sign	Explain
	Brand	SH	Clearing capacitor
CBB61	Type	P0	Class of safety protection
450VAC	Rated voltage	 GB/T 3667.1	CQC Approved and apply standard
2.0μF±5%	Rated capacitance and	 UL 810 C22. 2 No.190	UL and CUL Approved and
40/70/21	Climate category	 EN 60252-1 IEC 60252-1	VDE Approved and apply standard
50/60Hz	Rated frequency	8C	Making time
C	Running Class		

Dimensions:

Tinned lead wire (mm)

450Vac					
C_N (µF)	W±1	H±1	T±1	P	RS Article Number
2.0	32.0	28.0	14.0	27.5	843-2051
1.2	36.0	22.0	13.0	32.5	843-2045
2.0	36.0	24.0	14.0	32.5	843-2039
3.0	36.0	28.0	18.0	32.5	843-2023
4.0	36.0	30.0	18.0	32.5	843-2036

Note: 1. when P=22.5/27.5mm,d=0.8±0.05mm; when P>27.5mm,d=1.0±0.05mm

Tabs or Insulated flexible lead wires (mm)

450Vac					
C_N (µF)	W±1	H±1	T±1	PA	RS Article Number
1.5	36.0	23.0	13.0	32.5	843-2032
4.0	47.0	30.0	18.0	37.0	843-2014

Note: 1. Dimension of tab please refer to outline drawing

Tinned lead wire (mm)

350Vac					
C_N (µF)	W±1	H±1	T±1	P	RS Article Number
2.2	32.0	28.0	14.0	27.5	843-2042
2.5	32.0	28.0	14.0	27.5	843-2020 & 843-2026

Tinned lead wire (mm)

250Vac					
C_N (µF)	W±1	H±1	T±1	P	RS Article Number
4.0	32.0	28.0	17.0	27.5	843-2054
4.0	36.0	27.0	14.0	32.5	843-2048

Test Method And Performance:

No.	Item	Performance	Test Method (IEC 60252-1)
1	Solder ability (for wire terminals)	Good quality of tinning	Solder temperature: 245°C ±5°C Immersion time: 2.0s±0.5s
2	Terminal strength	There shall be no visible damage	Tension: 20N(for wire terminals) 40N(for tabs) Bend: 10N, (only for wire terminals) The terminals shall be bent 2 times in each direction
3	Vibration	There shall be no visible damage Capacitance change: ≤0.5% High voltage between terminal and case: 2000Vac, 60s, There shall be no permanent breakdown or flashover	f=10Hz to 55Hz a=+/-0.35mm Test duration per axis = 10 frequency cycles (3 axes offset from each other by 90°C), 1 octave per minute, the total times are 135min for 3 axes.
4	Resistance to solder heat (for wire terminals)	There shall be no visible damage. The marking shall be legible. The capacitance change ≤0.5%	Solder temperature:260°C±5°C Immersion time: 10s±1s
5	Damp heat test	There shall be no visible damage. The marking shall be legible. Capacitance change: ≤0.5% High voltage between terminals: 2.0Un, 60s High voltage between terminal and case: 2000Vac, 60s. There shall be no permanent breakdown or flashover.	Temperature: 40°C ±2°C Humidity: 93 $\frac{+2}{-3}$ %RH Duration: 21days
6	Endurance test	During test, no permanent breakdown, interruption or flashover shall occur Liquids are allowed to wet the surface but not to form droplets Capacitance change: ≤3%	Test time: 600 hours, Class C Temperature: maximum permissible capacitor operating temperature (+70°C or +85°C) Test voltage: 1.25 Un Continuous
7	Self-healing test	There shall be no visible damage. The marking shall be legible. Change of capacitance: ≤0.5% Insulation resistor: IR≥100s, charge voltage 100Vdc, 60s, temperature 20°C A total of 25 or more than clearings shall be obtained from 10 capacitors tested but if any capacitor shows more than five clearings, only five shall be used in calculating the	The capacitors shall be subjected to an a.c. voltage of 2.0Un, which is increased at a rate of not more than 200V/min. until five clearings have occurred since the beginning of the test or until the voltage has reach 3.5Un. The voltage shall be decreased to 0.8 times the value at which the fifth clearing occurs or 0.8 times 2.15Un whichever is lower and maintained for 10s.

		total.	
8	Ball-pressure test	The sample will be cooled in cooling water for 10s after test. Diameter of impression not exceeding 2mm	Sample: Epoxy Resin piece Sample size: 30mm×30mm Sample thickness: ≥3mm Temperature: (125±5) □ Ball diameter: φ5 Pressure: 20N Testing time: 1h
9	Glow-wire test	Any flame or glowing of the specimen shall extinguish within 30s of with drawing the glow-wire, and any flaming drops shall not ignite the tissue	Sample: Epoxy Resin piece Sample size: 30mm×30mm Sample thickness: ≥3mm The temperature of the tip of the glow-wire: (550±10)℃ , I _n ≤0.5A ; (850±15)℃ , I _n > 0.5A ; Testing time: 30s±1s The tissue spread out below the sample: 200mm±5mm
10	Tracking test	The electric current of the surface of sample: < 0.5A ; The sample shall not be ignited	Sample: Epoxy Resin piece Sample size: 15mm×15mm Sample thickness: ≥3mm Electrode: Pt Pressure: 1.0N±0.05N Drop of liquid: 50 or the sample has been destroyed.

Quality ensuring test (before shipment):

Inspection item (each batch)	Inspection level (GB 2828)	
	IL	AQL
Appearance inspection	II	1.5%
Dimensions		
Capacitance	II	0.25%
Tangent of the loss angle		
Dielectric strength		
Insulation resistance		
Solderability	S-3	2.5%