

2018

MOTOR CAPACITORS

CONTACT:

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产 品 说 明

NGM ASIA Catalogue

一、适用标准 Standard Performance:

所有设计均符合EIA-463-B-2003标准

产品分类:

A类, 长寿命

NG Yangzhou Capacitors meet and exceed EIA-463-B-2003 International Standard Requirements:

Type 1: Heavy Duty and Long Life

Type 2: Standard Duty

二、适用范围 Application:

用于启动型交流单相电动机, 广泛用于洗衣机、冰箱、空调、风扇、电动工具和电动门等。

These non-polarized capacitors are widely applicable to start A. C. mono-phase motors. They are suitable for washing machines, refrigerators, air conditioning systems, fans, machine tools, garage door openers, pumps, and many other purposes.

三、产品性能 Capacitor Performance

3.1 容量范围: 21 – 1410 μ F

3.2 电压范围: 110, 125, 165, 220, 250 and 330 VAC

3.3 使用频率范围: 47Hz – 66HZ, 标准频率: 50/60 HZ

3.4 使用环境温度: $-20 + 65^{\circ}$ C max.

3.5 功率因素: $\leq 10\%$ 、 15%

3.6 允许过压: 1.4倍工作电压, 1秒

3.7 允许容量偏差: N: $-0 \sim +20\%$, E: $-0 \sim +22\%$, P: $-0 \sim +35\%$, R: $-0 \sim +16\%$, S: $-0 \sim +25\%$

3.1 Capacitance Range: 21 – 1410 μ F

3.2 Voltage Range: 110, 125, 165, 220, 250 and 330 VAC

3.3 Rated Frequency: 47Hz – 66HZ, normal frequency: 50/60 HZ

3.4 Operating Temperature: $-20 + 65^{\circ}$ C max.

3.5 Power Factor: $\leq 10\%$ 、 15%

3.6 over voltage permission: After applying 1.4 time working voltage, for 1 secretary:

3.7 Capacitance Tolerance: N: $-0 \sim +20\%$, E: $-0 \sim +22\%$, P: $-0 \sim +35\%$, R: $-0 \sim +16\%$, S: $-0 \sim +25\%$

四：产品结构 Capacitor Construction

- 4.1 外壳:采用防油和防湿酚醛树脂压制外壳。
- 4.2 引出脚: 单焊片型, 双焊片型和三焊片型, 宽度为6.35mm, 厚度: 0.8mm
- 4.3 安装附件, 根据需要提供。

4.1 Case: Phenolic Case with a positive pressure safety vent.

4.2 Terminals: Designed to accept 1/4; single, double and triple quick female connectors with solder lug option.

4.3 Accessories: According to different Customer requests

五、额定电压和允许最大电压 Rated voltage and Max Voltage

额定电压 (Vac) Rated Voltage	110	125	165	220	250	330
最大电压 (Vac) Max Voltage	130	150	200	265	300	395

六、标识 Marking

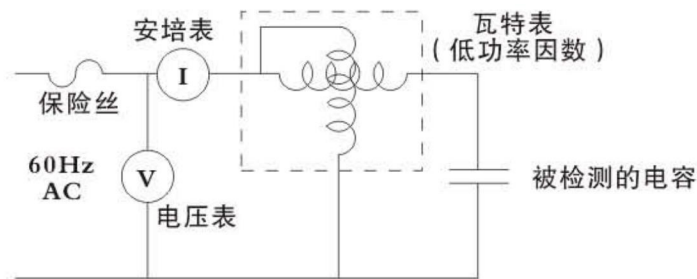
基本内容：商标，容量范围，额定电压，工作频率，最高工作温度，制造日期&年份，UL标识。根据需要可以添加其他标识。

Marking: 1) Manufacturer identification, 2) Capacitance Range, 3) Rated Voltage, 4) Working Frequency, 5) Maximum Operating Temperature, 6) Manufacturing Date (Year–Week) and 7) Certification Marking: (UL, CQC) 8) Special marking available on request.

七、电容量和功率因素测量

电容量和功率因数的测试应在标准测试环境，50/60Hz的正弦电压、电流下进行。测试电路如图7所示。应在2秒内对电压表进行读数，3秒内读电流表，4秒内读瓦特表。加在电容器上的电压不应超过4秒。

The Capacitance (C) and Power Factor (PF) are measured by the Voltage, current power method with 60Hz sinusoidal–rated voltage applied to the capacitors at standard test conditions. The test circuit is shown below. The voltmeter shall be ready within 2 Seconds, the ammeter within 3 seconds and the wattmeter within 4 seconds after the application of the test voltage. Do not apply voltage to the capacitors for more than 4 Seconds.



警告：为了安全，测试用电容器和连接应在封闭状态下

图7-电容量/功率因数测试电路

Capacitance/power factor test circuit

引用的公式如下 Applicable equations are given below:

$$C = \frac{1 \times 10^6}{2 \pi f V}$$

$$PF = \frac{W \times 100}{V \times I}$$

在此公式中：

C为电容量，以 μF 为单位；

I为电流，以A为单位，有效值；

f为频率，以Hz为单位；

V为电压有效值；

PF为功率因数，百分比；

W为功率，以W为单位；

电容量应在规定范围内，功率因数不超过10%；

Where:

C is capacitance in microfarads;

I is current in amperes (crms)

f is for frequency in Hz;

V is volts in rms;

PF is power factor in %;

W is power in Watts;

The capacitance shall be within the stated range. The power factor shall not exceed 10%.

八、标准电容量、额定电压和壳号，见下表：

Type 2 motor start capacitors Size/Rating see as below

电压Voltage(Vac)	110	125	165	220	250	330
容量Capacitance Value(μ F)	壳号 Case	壳号 Case	壳号 Case	壳号 Case	壳号 Case	壳号 Case
21-25	1	1	1	1	1	1
25-30	1	1	1	1	1	1
30-36	1	1	1	1	1	1
36-43	1	1	1	1	1	2
43-52	1	1	1	1	1	2
47-56	1	1	1	1	1	4
53-64	1	1	1	1	1	4
64-77	1	1	1	1	2	4
72-86	1	1	1	1	4	4
88-106	1	1	1	1	4	4
108-130	1	1	1	1	4	5
130-156	1	1	1	1	4	5
145-175	1	1	1	1	4	5
161-193	1	1	1	2	5	5
189-227	1	1	1	2	5	7
216-259	1	1	2	4	5	7
233-280	1	1	4	4	5	7
243-292	1	1	4	4	5	8
270-324	1	1	4	4	7	8
324-389	1	2	4	5	7	8
340-408	1	2	4	7	7	8
378-454	1	4	4	7	8	
400-480	1	4	4	7	8	
430-516	2	4	4	7	8	
460-552	2	4	4	8	8	
540-648	4	4	5	8	8	
590-708	4	4	5	8	8	
708-850	4	5	5	8		
829-995	4	5	7			
1000-1200	5	5	7			
1202-1224	5	5	7			
1175-1410	5	7	8			

壳号对应尺寸 case size (mm)

壳号 Case size	1	2	3	4	5	6	7	8
直径 Diameter	36.5	36.5	36.5	46.0	46.0	52.4	52.4	65.0
高度 Height	70.0	85.7	111	85.7	111	85.7	111	111
引出脚间距 Distance of terminals	12.7	12.7	12.7	16.0	16.0	22.2	22.2	22.2

Accelerate life test for type2 capacitors

B类产品电容的充放电时间和循环次数见下表

The duty cycles and duration of test for standard duty applications are listed below

额定测试电压 Rated test voltage ac(rms)	额定电容量 Capacitance rating(μf)		充放电时间 Duty Cycle(S)		循环次数 Duration of test* (no. of starts)
	From	To	On	Off	
110	21-25	124-149	$\frac{3}{4}$	29 $\frac{1}{4}$	50,000
	130-156	243-292	1	59	50,000
	270-324	378-454	1	89	33,500
	400-480	540-648	1	119	25,000
	590-708	850-1020	1	179	16,500
	1000-1200	1326-1590	1	239	12,500
125	21-25	88-106	$\frac{3}{4}$	29 $\frac{1}{4}$	50,000
	108-130	145-174	1	59	50,000
	161-193	233-280	1	89	33,500
	243-292	378-454	1	119	25,000
	400-480	590-708	1	179	16,500
	645-774	1326-1890	1	239	12,500
165	21-25	88-106	1	59	33,500
	108-130	124-149	1	89	33,500
	130-156	216-259	1	119	25,000
	233-280	340-408	1	179	16,500
	378-454	850-1020	1	239	12,500
220	21-25	43-52	1	59	33,500
	37-56	72-86	1	89	33,500
	88-106	145-174	1	119	25,000
	161-93	243-292	1	179	16,500
	270-324	460-552	1	239	12,500
250	21-25	30-36	1	59	33,500
	36-43	64-77	1	89	33,500
	72-86	88-106	1	119	25,000
	108-130	189-227	1	179	16,500
	216-259	430-516	1	239	12,500
330	21-25	21-25	1	59	33,500
	25-30	30-36	1	89	33,500
	36-43	64-77	1	119	25,000
	72-86	88-106	1	179	16,500
	108-130	270-324	1	239	12,500

*表中的启动次数是减少的，以便测试时间不超过35天。类型2电容器在额定125V电压以下，应能启动50,000次。在更高的电压下，能达到40,000次。

* The number of starts shown are reduced starts for accelerated testing so that test time does not exceed 35 days. Type2 capacitors should be capable of 50,000 starts for ratings to 125 volts and 40,000 starts for higher voltages.

十、产品代码系统: (以61B1D110161NNAO为例)

Part number system(examples as 61B1D110161NNAO)

