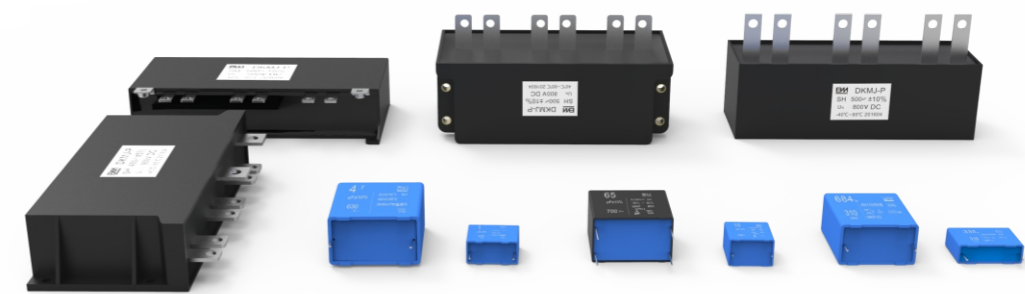


CAPACITOR CATALOG 丰明电容

车载类电容器
EV Capacitor

为成功的企业配套。为企业的成功配套
To support a successful enterprise
To support the success of an enterprise



广东丰明电子科技有限公司
GUANGDONG FENGMING ELECTRONIC TECH. CO., LTD.

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广东丰明电子科技有限公司，始创于2000年，占地3.3万平方米，拥有10万平米高标准厂房，日产电容器600万只，2022年产值9.1亿。

丰明电子分设三大研究中心及六大产品事业部，从事多类薄膜电容器及金属化薄膜的应用研究、开发、设计、制造与销售。

As the leading MPP capacitor manufacturer in China, BM has been specialized in the development, manufacturing and sales of capacitor for decades.

BM capacitors are widely used in appliance, lighting, industrial equipment, solar, inverter, UPS etc. With stable quality and superior service, BM has been the long-term partner of world-wide customers.

BM has acquired certificates of ISO, CQC, VDE, UL, KC etc which could fulfill customers' versatile requirements.

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丰明电子以“为企业的成功配套，为企业的成功配套”为经营理念，以“专业化为主、多元化发展”的市场细分方针，陆续和格力、海尔、美的、格兰仕、九阳、苏泊尔、艾美特、开利、亨特、三星、LG等国内外知名品牌建立了良好而持久的合作关系。

“To support a successful enterprise, to support the success of an enterprise.” Fengming hold this operation principle, and stick on specialization and diversification, we established long and stable cooperation with many famous enterprise at home and abroad, such as Gree, Haier, Midea, Galanz, Joyoung, Supor, Airmate, Carrier, Hunter, Samsung, LG.



三大研究中心 3 Research Centers



六大产品事业部 6 Product Divisions



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Famous-brand in Guangdong Province



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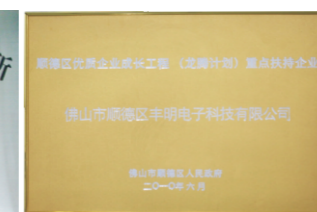
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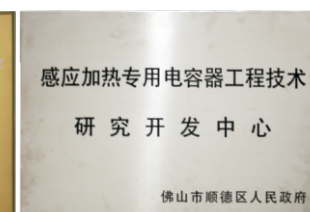
广东省民营科技企业
Private Science and Technology Enterprises in Guangdong Province



广东欧博企业管理研究所
工匠型企业实验基地
Craftsman Enterprises Laboratory Base for OuBo Enterprises management Research Institute in Guangdong Province



顺德区龙腾企业
LQ Enterprises in Shunde Area



顺德区感应加热专用电容器
工程技术研究开发中心
Induction Heating Capacitor Engineering R&D Center in Shunde Area



产品开发中心 R&D Center



工艺研究中心 Technology Research Center



实验检测中心 Testing Center



专利清单 Patent List :

实用新型专利 Utility model patent

申请人	申请号	授权日期	名称
1.广东丰明电子科技有限公司	200720050835.3	2008-03-12	一种新型电容器绝缘塑料外壳
2.广东丰明电子科技有限公司	200920056248.4	2010-02-17	一种薄膜分切机的收卷轴
3.广东丰明电子科技有限公司	200920056247.X	2010-02-17	一种电容器端子包裹器
4.广东丰明电子科技有限公司	200920056249.9	2010-02-17	一种电容器外壳
5.广东丰明电子科技有限公司	200920058449.8	2010-05-26	一种电容器的自动包胶机
6.广东丰明电子科技有限公司	200920058450.0	2010-05-05	一种安全型金属化薄膜电容器
7.广东丰明电子科技有限公司	201020119520.1	2010-02-09	一种安规电容器的外壳
8.广东丰明电子科技有限公司	201020505949.4	2011-04-27	一种新型电容器外壳
9.广东丰明电子科技有限公司	201020538715.X	2011-03-16	一种用于直流滤波电容器的外壳
10.广东丰明电子科技有限公司	201020572625.2	2011-04-27	一种用于外接引线的电容器
11.广东丰明电子科技有限公司	201020613387.5	2011-06-15	一种用于感应加热的模块式电容器
12.广东丰明电子科技有限公司	201020627485.4	2011-06-29	一种具有安全防爆的电容器
13.广东丰明电子科技有限公司	201120109690.6	2011-10-05	一种新型微波炉用干式结构电容器
14.广东丰明电子科技有限公司	201120136554.6	2011-12-14	一种用于直流滤波的中心散热式电容器
15.广东丰明电子科技有限公司	201120562909.8	2012-08-15	用于感应加热的外置型电容器
16.广东丰明电子科技有限公司	201320346909.3	2013-11-13	一种中心加强散热式电容器
17.广东丰明电子科技有限公司	201320375209.7	2013-11-13	一种全塑封式端子引出型电容器
18.广东丰明电子科技有限公司	201520582143.8	2015-12-09	一种圆芯方壳端子引出型电容器
19.广东丰明电子科技有限公司	201720098653.7	2017-10-24	一种高效防潮电容器
20.广东丰明电子科技有限公司	201720098661.1	2017-08-04	一种用于电磁感应加热的电容器
21.广东丰明电子科技有限公司	201821129180.3	2019-01-04	一种内串式金属化安全膜电容器
22.广东丰明电子科技有限公司	201821727726.5	2019-05-21	一种散热式模组电容器
23.广东丰明电子科技有限公司	201821812365.4	2019-04-23	一种便于定位结构的电容器
24.广东丰明电子科技有限公司	201821907973.3	2019-07-02	一种高压金属箔式电容器
25.广东丰明电子科技有限公司	201920033666.5	2019-08-13	一种内串式抗电晕金属化膜
26.广东丰明电子科技有限公司	201920492709.6	2019-11-22	一种快速换接引线型电容器
27.广东丰明电子科技有限公司	201920636823.1	2019-11-22	一种插入式安装耳的电容器外壳
28.广东丰明电子科技有限公司	201921524741.4	2020-04-03	一种内串式防爆薄膜电容器
29.广东丰明电子科技有限公司	202020269223.9	2020-10-16	一种降低冷热冲击应力的电容器

外观专利 Appearance patent

申请人	申请号	授权日期	名称
1.广东丰明电子科技有限公司	201030569113.6	2011-02-09	电容器 (CBB61)
2.广东丰明电子科技有限公司	201730307058.5	2017-12-12	方形电容器壳体
3.广东丰明电子科技有限公司	201830117513.X	2018-03-20	安规电容器 (标识设计)

丰明电子全面执行ISO9001及ISO14001国际质量与环境体系标准。

Complied with ISO9001 and ISO14001 International quality and environment standard.

执行ISO9001、ISO14001和ISO45001国际体系标准



ROHS

IATF16949汽车质量管理体系认证



UL



TUV



一、主要引用标准

Main reference standards

我司车规类电容器主要引用标准是GB/17702, GB/T6346.14, IEC61071, IEC60384-14和AEC-Q200标准。我司主要依据以上标准, 制定了车规电容器各个型号产品的企业标准, 以供内部引出。车规电容器主要引用标准列举如下:

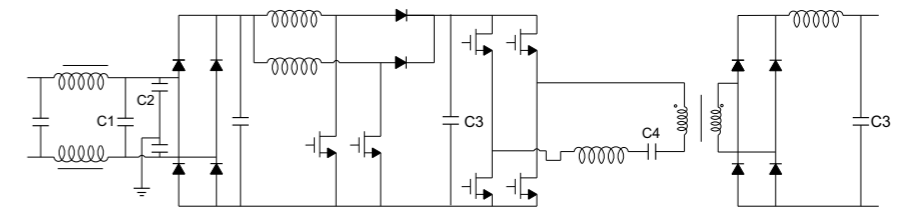
The main standards of Fengming EV capacitor are GB/17702, GB/T6346.14, IEC61071, IEC60384-14 and AEC-Q200. According to the basic requirement of above standards, Fengming made detailed standards of various types of capacitors for internal use. The corresponding specification lists as below for EV capacitor

主要引用标准		
序号 NO.	标准号 Standard NO.	标准名称 Standards
1	GB/17702 (IEC61071)	电力电子电容器 Power electronic capacitors
2	AEC-Q200	AEC-Q200 STRESS TEST
3	GB/T 6346-14 (IEC60384-14)	抑制电源电磁干扰用固定电容器 Fixed capacitors for electromagnetic suppression and connection to the supply mains

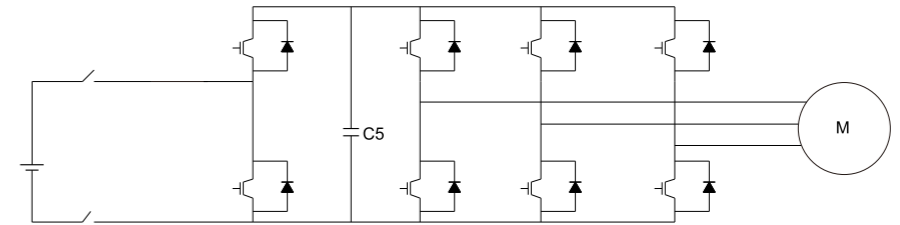
二、选型指引

Guide for capacitors selecting

OBC应用 典型电路图



电驱应用 典型电路图



选型指引		
电容 Capacitor	功能 Fuction	型号 Type
C1	抗干扰抑制 EMI Suppression	BX2
C2	抗干扰抑制 EMI Suppression	BY2
C3	直流支撑, 直流滤波 DC-Link	B82
C4	Lc谐振 Resonant	B52
C5	电驱定制电容 DC-Link (Customized Designs)	B92

三、标准术语

- 1、额定容量 C_N
设计电容器时所规定的电容量值。

- 2、电容的允许偏差 C_{tol}
实测电容量与额定容量之间的误差，其数值为：
 $C_{tol} = (C - C_N) / C_N * 100\%$
C:电容器的实际测试电容量
 C_N :电容器的额定容量
电容的允许偏差决定其用途，允许偏差的优先值为±5% (J级) ；±10% (K级) 。

- 3、额定电压 U_N
设计电容器时所规定的电压值。
对采用GB/T3984.1/2(IEC60110-1/-2)、GB/12747.1/2(IEC60831-1/-2)、GB/11024.1/2 (IEC60871-1/-2)标准的电容器，额定电压指设计电容时规定的交流电压方均根值；
对采用GB/17702 (IEC61071)标准的电容，可分为以下两种：

额定交流电压 (U_N) ：
设计电容时所采用的反复型波形的任一极性的最高运行峰值周期电压；
额定直流电压 (U_N) ：
设计电容时所采用的非反复型波形的任一极性的可连续运行的最高运行峰值电压。

- 4、有效电压 U_{rms}
连续运行的最大正弦交流电压的方均根值

- 5、纹波电压 U_r
单向电压的峰到峰的交流分量

- 6、非周期性冲击电压 U_s
由切换或系统中任何别的扰动所导致的峰值电压，此电压只允许持续比基本周期短的时间和出现有限的次数。

- 7、绝缘电压 U_i
电容元件和端子对外壳或对地电压的额定值 (方均根值) 。如果未作规定，此绝缘电压的方均根值等于额定电压除以 $\sqrt{2}$

- 8、最大电流 I_{max}
连续运行的最大电流的方均根值

- 9、最大峰值电流 I
在连续运行中瞬时发生的最大电流的幅值。其数值为：
 $I = C_N \times (dv/dt)$

- 10、最大冲击电流 I_s
由切换或系统中任何别的扰动所导致的允许峰值电流，此电流只允许出现有限的次数。

Terminologies

- 1、Rated capacitance C_N
Capacitance value for which the capacitor has been designed .

- 2、Tolerance on rated capacitance C_{tol}
The deviation of actual measured capacitance from rated capacitance, the value is following:
 $C_{tol} = (C - C_N) / C_N * 100\%$
C: Actual measured capacitance of a capacitor
 C_N :Rated capacitance of a capacitor
Tolerance on rated capacitance determines its application, its priority values are ±5% (J), ±10% (K).

- 3、Rated voltage U_N
Voltage assigned to the appliance by the manufacturer for the capacitor referenced to GB/T3984.1/2(IEC60110-1/-2), GB/12747.1/2(IEC60831-1/-2), GB/ 1024.1/2 (IEC60871-1/-2), It means the r.m.s value of a.c. voltage for which the capacitor has been designed.
For the capacitor referenced to GB/17702 (IEC61071), it is divided into the two following parts:
Rated a.c. voltage (U_N):
Maximum operating peak voltage of either polarity of a reversing type waveform for which the capacitor has been designed.
Rated d.c. voltage (U_N):
maximum operating peak voltage of either polarity but of a non -reversing type waveform for which the capacitor has been designd.

- 4、Rms voltage U_{rms}
Root mean square of manimum value of sinusoidal a.c. voltage in continuous operation.

- 5、Ripple voltage U_r
Peak-to-peak alternating component of the unidirectional voltage

- 6、Non-recurrent surge voltage U_s
Peak voltage induced by a switching or any other disturbance of the system which is allowed for a limited number of times and for durations shorter than the basic period

- 7、Insulation voltage U_i
R.M.S. value of the sine wave voltage designed for the insulation between terminals of capacitors to case or earth. If not specified, the R.M.S. value of the insulating voltage is equivalent to the rated voltage divided by $\sqrt{2}$.

- 8、Maximum current I_{max}
Maximum R.M.S. current for continuous operation

- 9、Maximum peak current I
Maximum peak current that can occur during continuous operation.
The value is following:
 $I = C_N \times (dv/dt)$

- 10、Maximum surge current I_s
Peak non-repetitive current induced by switching or any other disturbance of the system which is allowed for a limited number of times, for durations shorter than the basic period.

- 11、额定频率 f_N
设计电容器时所规定的频率

- 12、电容器的阻抗成为最小时的最低频率。
 $f_r = 1 / (2\pi\sqrt{L_s C_N})$

- 13、电容器的损耗因数 $tg\delta$
在规定的正弦交流电压和频率下，电容器耗散的有功功率与电容器的无功功率之比，其值为等效串联电阻与容抗的比值。

- 14、介质损耗因数 $tg\delta_0$
电容器的介质材料在额定电压和频率下的损耗常数。聚丙烯薄膜的介质损耗因数为 2×10^{-4}

- 15、等效串联电阻ESR
一个有效电阻，当它和所探讨的电容器有相等电容值的理想电容器相串联时，在规定的运行条件下，该电阻中的损耗功率将等于该电容器中耗散的有功功率。

- 16、杂散电感 L_s
一个有效电感，当它和所探讨的电容器有相等电容值的理想电容器相串联时，其谐振频率等于该电容器的谐振频率。

- 17、热阻 R_{th}
电容器阻止热量传递能力的综合参量，表明了1W热量所引起的温升大小，单位为 $^{\circ}C/W$ 或 K/W 。

- 18、电容器的损耗 P_j
电容器所消耗的有功功率，其数值为：
 $P_j = I_{rms}^2 \times ESR$

- 19、运行温度 θ_o
电容器达到热平衡状态时的外壳最热点温度。

- 20、最高运行温度 θ_{max}
电容器可以运行的最高外壳温度。

- 21、最低运行温度 θ_{min}
电容器能正常工作时的最低温度

- 22、冷却空气温度 θ_{amb}
在稳定状态条件下，在电容器组最热区域的两单元之间中途所测得的冷却空气的温度。如果仅涉及一单元，则为距电容器外壳大约0.1m和距基底三分之二高度处所测得的温度。

- 11、Rated frequency (of a capacitor) f_N
Frequency for which the capacitor has been designed .

- 12、Resonance frequency
Lowest frequency at which the impedance of the capacitor becomes minimum.
The value is following:
 $f_r = 1 / (2\pi\sqrt{L_s C_N})$

- 13、Tangent of the loss angle of a capacitor $tg\delta$
Ratio between the equivalent series resistance and the capacitive reactance of the capacitor at specified sinusoidal alternating voltage and frequency .

- 14、Dielectric dissipation factor $tg\delta_0$
Constant dissipation factor of dielectric material for all capacitors at their rated frequency. The typical loss factor of polypropylene film is 2×10^{-4}

- 15、Equivalent series resistance of a capacitor ESR
Effective resistance which, if connected in series with an ideal capacitor of capacitance value equal to that of the capacitor in question, would have a power loss equals to active power dissipated in that capacitor under specified operating conditions

- 16、Self-inductance L_s
Effective inductance which, if connected in series with an ideal capacitor of capacitance value equal to that of the capacitor in question, would have the resonance frequency equals to the resonance frequency in that capacitor.

- 17、Thermal resistance R_{th}
A heat property and a measurement of a temperature difference by which a capacitor resists a heat flow. It shows the temperature difference when a unit of heat energy flows through a capacitor in unit time. It has the units $^{\circ}C/W$ or K/W .

- 18、Capacitor losses P_j
Active power dissipated in the capacitor. The value is following:
 $P_j = I_{rms}^2 \times ESR$

- 19、Operating temperature θ_o
Temperature of the hottest point on the case of the capacitor, when in thermal equilibrium.

- 20、Maximum operating temperature θ_{max}
Highest temperature at which the capacitor may be energized.

- 21、Lowest operating temperature θ_{min}
Lowest temperature at which the capacitor may be energized

- 22、Cooling-air temperature θ_{amb}
Temperature of the cooling air measured at the hottest position in bank ,under steady-state conditions ,midway between two units . If one unit is involved ,it is the temperature measured at a point approximately 0.1 m away from the capacitor container and two -thirds of the height from its base .

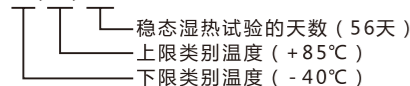
23、外壳温升 $\Delta\theta_{case}$
外壳最热点温度和冷空气温度之差。

23、Container temperature rise $\Delta\theta_{case}$
Difference between the temperature of the hottest point of the container and the temperature of the cooling air.

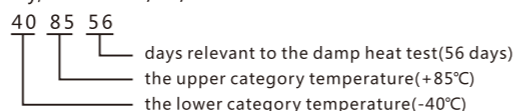
24、热点温度 θ_{hs}
电容器内部最热点处的温度。其数值为：
 $\theta_{hs} = \theta_{amb} + P_j \times R_{th}$

24、Hotspot temperature θ_{hs}
Temperature at the hottest spot inside the capacitor. The value is following:
 $\theta_{hs} = \theta_{amb} + P_j \times R_{th}$

25、气候类别
电容器的气候类别用最低和最高允许电容器运行温度和湿热严酷度来表示，如：40/85/56



25、Climatic category
The climatic category which the capacitor belongs to is expressed with minimum, maximum operating temperature and damp heat severity, such as 40/85/56



26、绝缘电阻 IR
绝缘电阻为电容器充电后所加的直流电压和流经电容器的漏电流值的比值，单位为MΩ。
绝缘电阻也常以时间常数 (τ) 来表示，其值为
绝缘电阻和电容量的乘积 (即 $\tau = IR \times C_N$)，单位为s。

26、Insulation resistance IR
The insulation resistance is the ratio between an applied DC voltage and the resulting leakage current. It is expressed in MΩ.
The insulation resistance is usually expressed with time constant(τ), the time constant in expressed in seconds with the following formula:
 $\tau = IR \times C_N$

27、自愈性
仅适用于金属化薄膜电容器，自愈性是指电容器发生局部电介质击穿后迅速恢复电性能的能力。
金属化薄膜电容的电极在薄膜上的金属层，此金属层是通过真空蒸发的方法将金属沉积在薄膜上，其厚度一般只有几十纳米，当介质上存在电弱点、杂质等，局部电击穿将可能发生，电击穿处的电弧放电所产生的能量迅速把击穿点邻近处的金属层蒸发，使击穿点与周围电极隔开，电容器的电气性能恢复正常。

27、Self-healing
It is only applicable to metallized film capacitor. Self-healing means the ability that the electrical properties of the capacitor are rapidly restored after a local breakdown of the dielectric.
The electrode of metallized film capacitor is the metal coating of the metalized film, which are vacuum-deposited directly onto the plastic film, have a thickness of only several tens nm. At weak point or impurities in the dielectric, a dielectric breakdown would occur. The energy released by the arc discharge in the breakdown channel rapidly evaporate the thin metal coating in the vicinity of the channel. The insulated region thus resulting around the former faulty area will cause the capacitor to regain its full operation ability.

28、电容器的失效率
失效率为电容器工作到某一时刻尚未失效，在该时刻后，单位时间内发生失效的概率，单位为FIT (1FIT = 1/(10⁹小时))
如：10000只电容在给定条件下工作10000小时出现10只失效，则
 $\lambda = 10 / (10000 \times 10000) = 100FIT$

28、Failure rate
Failure rate indicates the failure probability of capacitors in unit time after a certain point, while the capacitors haven't failed before the certain point. The unit is FIT (1FIT = 1/(10⁹ hour))
For example, 10000 pcs of the capacitors work at given conditions for 10000 hrs and 10 pcs of capacitors failed, so
 $\lambda = 10 / (10000 \times 10000) = 100FIT$.

29、电容器的预期寿命
电容器的预期寿命是一个基于实践经验和理论计算的统计学数值，其值主要与运行电压和热点温度有关。一般而言，不同应用场合的电容器，其预期寿命是不同的，如：应用在直流滤波电路中的电容器，在额定电压和热点温度为70°C以内的应用条件下，其预期寿命一般可达100 000小时。
电容器预期寿命粗略评估，可以这样认为：电容器使用的电压每上升10%其寿命下降一半，热点温度每上升10°C其寿命也下降一半。

29、Expected Lifetime of a capacitor
Expected Lifetime is a statistical value calculated on the basis of experience and on theoretical evaluations, it depends on the applied voltage and the hot spot temperature during operation. Generally speaking, for capacitors applied in different situation, the designed average service lives are different. For example, capacitors used in DC-Link circuits will have a expected lifetime of probable 100000 hrs at rated voltage and 70°C hot spot temperature.
A rough evaluation for the expected capacitor life-time can be indicated like this: 10% increase of the voltage, half long lifetime will lose. Also 10% increase of hotspot increase, half long lifetime will lose.

四、注意事项

- 1、产品使用注意事项
 - 1) 电容器的选用取决于施加的最高电压，并受电流、频率和使用环境的影响。
 - 2) 一般情况下，薄膜电容器封装使用耐火性阻燃材料 (如阻燃外壳、阻燃环氧等)，但是如果持续高温或火焰仍可以使电容器芯子收缩变形导致外壳破裂，甚至出现芯子融化或燃烧。
- 2、产品存储注意事项
 - 1) 不宜存放在高温高湿的环境中，应尽可能在以下条件下保存：
温度： $\leq 35^\circ C$
湿度： $\leq 80\%RH$ ，不允许有冷凝
 - 2) 不宜存放在有腐蚀性气体的环境中，如硫化物、酸、碱、盐、有机溶剂等腐蚀性物质
 - 3) 未拆开原包装的基础上，产品的存放时间不宜超过24个月 (产品的包装或本体上的日期算起)

Caution items

1. Caution items in using plastic film capacitors
 - 1) The plastic film capacitor varies in the maximum applicable voltage depending on the applied voltage, current, frequency and operational environment.
 - 2) Generally speaking, although flame retardant shell or flame retardation epoxy is used in the coating or encapsulating of plastic film capacitor, continuous high temperature of firing will break the coating layer or plastic case of the capacitor, and may lead to melting and firing of the capacitor element.
2. Caution items in storing plastic film capacitors
 - 1) It shouldn't be located in particularly high temperature and high humidity, it must submit to the following conditions:
Temperature: $\leq 35^\circ C$
Humidity: $\leq 80\%RH$, no dew allowed on the capacitor.
 - 2) Capacitors may not be stored in corrosive atmospheres, such as sulfides, acids, lye, salts, organic solvents or other corrosive substances.
 - 3) When unchanging primal package, it shouldn't be stored more than 24 months (from the date marked on the capacitor's body or the label glued to the package)

- 3、产品订购注意事项
请尽可能提供以下信息
 - 1) 应用的设备：OBC, 充电桩, 电驱等
 - 2) 应用的场合：如直流滤波、IGBT吸收、谐振等
 - 3) 容量要求及允许偏差
 - 4) 电压要求：如工作电压、纹波电压、非周期性电压等
 - 5) 电流要求：如最大电流，脉冲电流等
 - 6) 频率范围：如工作频率、脉冲频率等
 - 7) 工作环境：如环境温度、环境湿度、散热方式等
 - 8) 安装尺寸要求：如外形尺寸、引出方式

3. Caution items in ordering plastic film capacitors
Please provide following information as possible as you can
 - 1) Applications: such as transducer, welding machine, induction heating machine
 - 2) Application situation: such as DC-Link, IGBT snubber, resonance, etc.
 - 3) Rated capacitance and tolerance
 - 4) Voltage: such as working voltage, ripple voltage, non-recurrent surge voltage, etc.
 - 5) Current: such as maximum current, pulse current, etc.
 - 6) Frequency: such as working frequency, pulse frequency, etc.
 - 7) Working environment: such as environment temperature, environment humidity, cooling mode, etc.
 - 8) Installation dimensions: such as external dimensions, terminal types, etc.



车载类电容系列

P₀₁ | B82 | PCB DC-Link塑壳系列
DC-Link Plastic Box Series for PCB

P₀₄ | B82A | PCB DC-Link塑壳系列
DC-Link Plastic Box Series for PCB

P₀₇ | BX2 | X2类抗干扰电容器
EMI Suppression Capacitor (Class X2)

P₀₉ | BY2 | Y2类抗干扰电容器
EMI Suppression Capacitor (Class Y2)

P₁₀ | B52 | 谐振塑壳系列
Resonance Plastic Box Series for EV/HEV

P₁₂ | B92 | 模块化电容器系列
DC-Link Capacitor (Customized Designs)



车载类电容器事业部

EV CAPACITOR DEPARTMENT

主要产品有DC-Link电容,滤波电容,谐振电容,安规类电容,订制品电容等。在OBC,充电桩,BMS系统,电驱系统,车载空调系统等各类车载电子设备中广泛应用。

Mainly produce DC-link capacitor, filter capacitor, resonance capacitor, EMI capacitor, customized designs capacitor and so on. It's widely used in OBC, charging pile, BMS system, electric drive, Car-carrying Air-conditioning system.

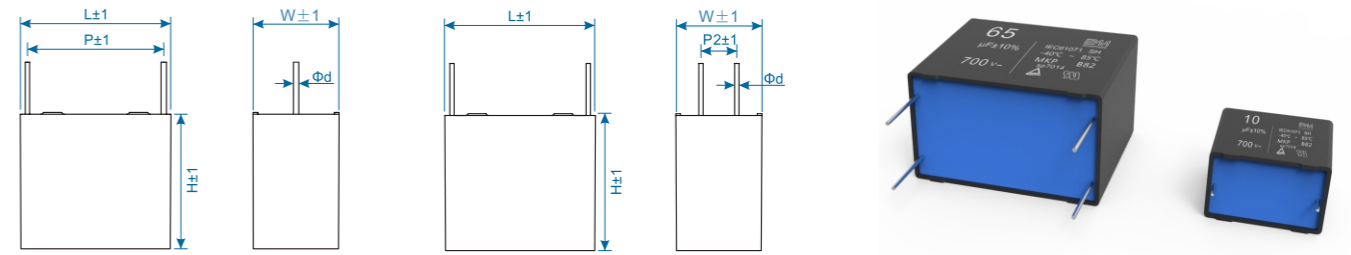
常用规格 Dimension

U _N	C _N (μF)	Dimension(mm)						dv/dt (V/μs)	tanδ (10 ⁻⁴)		ESR (typ) 10KHz (mΩ)	I _{RMS} (A)
		L	W	H	P	P2	d		1kHz	10kHz		
U _N , 85°C: 900VDC	1	32	9	18	27.5	-	0.8	70	9	85	60	2
	2	32	13	23	27.5	-	0.8	70	9	85	30	3
	3	32	15	24.5	27.5	-	0.8	70	9	85	20	3.5
	4	32	18	28	27.5	-	0.8	70	9	85	15	5.2
	5	32	21	31	27.5	-	0.8	70	9	85	12	6.5
	6	32	21	31	27.5	-	0.8	70	9	85	10	7.5
	7	32	22	38	27.5	-	0.8	70	9	85	9	8.5
	5	32	21	35	37.5	-	1.0	35	15	125	20	6
	6	32	21	35	37.5	-	1.0	35	15	125	19	6.5
	7	32	21	35	37.5	-	1.0	35	15	125	18	6.5
	8	32	21	35	37.5	-	1.0	35	15	125	16	7
	9	42.5	21	35	37.5	-	1.0	35	15	125	14	7.3
	10	42	20	43	37.5	-	1.0	35	15	125	12	8.5
	12	57.5	20	43	37.5	10.2	1.0	35	15	125	10	9.5
	15	57.5	24	44	37.5	20.3	1.2	35	15	125	8	11
	20	57.5	30	45	37.5	10.2	1.2	35	15	125	6	11
	15	57.5	25	45	52.5	10.2	1.2	15	25	240	14	9
	20	57.5	25	45	52.5	20.3	1.2	15	25	240	12	9.5
	25	57.5	30	45	52.5	20.3	1.2	15	25	240	10	11
	30	57.5	30	45	52.5	20.3	1.2	15	25	240	8	12.5
35	57.5	35	50	52.5	20.3	1.2	15	25	240	7	14.5	
40	57.5	35	50	52.5	20.3	1.2	15	25	240	6	5.5	
45	57.5	35	60	52.5	20.3	1.2	15	25	240	5	16.5	
50	57.5	35	60	52.5	20.3	1.2	15	25	240	4	18.5	
U _N , 85°C: 1100VDC	1	32	11	21	27.5	-	0.8	80	8	80	45	3
	2	32	15	24.5	27.5	-	0.8	80	8	80	22	4
	3	32	18	28	27.5	-	0.8	80	8	80	15	6.5
	4	32	21	31	27.5	-	0.8	80	8	80	11	8
	5	32	22	38	27.5	-	0.8	80	8	80	10	9
	5	42	21	35	37.5	-	1.0	40	14	120	18	6
	6	42	21	35	37.5	-	1.0	40	14	120	15	7
	7	42	20	43	37.5	-	1.0	40	14	120	13	8
	8	42	20	43	37.5	-	1.0	40	14	120	11	9
	9	42	24	44	37.5	10.2	1.2	40	14	120	10	10
	10	42	24	44	37.5	10.2	1.2	40	14	120	9	10.5
	12	57.5	30	45	37.5	20.3	1.2	40	14	120	8	12.5
	10	57.5	25	45	52.5	10.2	1.2	20	24	230	18	8
	12	57.5	25	45	52.5	10.2	1.2	20	24	230	15	8.5
15	57.5	25	45	52.5	10.2	1.2	20	24	230	12	9.5	
20	57.5	30	45	52.5	20.3	1.2	20	24	230	9	11.5	
22	57.5	35	50	52.5	20.3	1.2	20	24	230	8	13.5	
25	57.5	35	50	52.5	20.3	1.2	20	24	230	7	14.5	
30	57.5	35	60	52.5	20.3	1.2	20	24	230	5	16.5	

引用标准 Referenced standard IEC61071、AEC-Q200
 气候类别 Climatic category 40/85/21
 工作温度范围 Operating temperature range -40~85°C
 最高使用海拔 Max.altitude 2000m
 预期寿命 Lifetime expectancy 使用寿命: > 100 000 h (U_N和70°C)
 失效率 Failure rate FIT: < 10 x 10⁻⁹/h (0.5 x U_N, 40°C)
 40 FIT

电压范围 Voltage range 450VDC~1100VDC
 容量范围 Capacitance range 1μF~120μF
 容量允许偏差 Capacitance tolerance ±5%(J)/±10%(K)/±20%(M)
 介质损耗角正切值 tgδ ≤0.0002 (100Hz, 20°C±10°C)
 耐电压 withstanding voltage 1.5U_N 10s
 绝缘电阻 Insulation resistance IR.C > 10000 s
 过电压 Over voltage 1.1U_N 30% of on-load-dur
 1.15U_N 30min/day
 1.2U_N 5min/day
 1.3U_N 1min/day

产品可通过THB1000h双85测试
 THB series are available upon request



常用规格 Dimension

U _N	C _N (μF)	Dimension(mm)						dv/dt (V/μs)	tanδ (10 ⁻⁴)		ESR (typ) 10KHz (mΩ)	I _{RMS} (A)
		L	W	H	P	P2	d		1kHz	10kHz		
U _N , 85°C: 450VDC	1	32	9	18	27.5	-	0.8	65	10	95	52	2
	2	32	9	18	27.5	-	0.8	65	10	95	34	2.5
	3	32	11	21	27.5	-	0.8	65	10	95	22	3
	4	32	11	21	27.5	-	0.8	65	10	95	20	3.5
	5	32	13	23	27.5	-	0.8	65	10	95	16	4
	6	32	15	24.5	27.5	-	0.8	65	10	95	13	5
	7	32	15	24.5	27.5	-	0.8	65	10	95	11	5.5
	8	32	18	28	27.5	-	0.8	65	10	95	10	7.5
	9	32	18	28	27.5	-	0.8	65	10	95	9	7.5
	10	32	18	28	27.5	-	0.8	65	10	95	8	8.5
	12	32	21	31	27.5	-	0.8	65	10	95	7	10
	15	32	20.5	37	27.5	-	0.8	65	10	95	6	12
	10	42.5	17	28	37.5	-	1.0	30	15	150	14	7.5
	12	42.5	17	28	37.5	-	1.0	30	15	150	11	8.5
	15	42	21	35	37.5	-	1.0	30	15	150	9	9.5
	20	42	21	35	37.5	-	1.0	30	15	150	7	11
	22	42	20	43	37.5	-	1.0	30	15	150	6.5	11
	25	42	24	44	37.5	-	1.0	30	15	150	5.5	12
	30	42	24	44	37.5	10.2	1.2	30	15	150	4	14
	35	42.5	30	45	37.5	20.3	1.2	30	15	150	4	17
40	42.5	35	50	37.5	20.3	1.2	30	15	150	3.5	18	
40	57.5	30	45	52.5	10.2	1.2	15	32	320	8	13.5	
45	57.5	30	45	52.5	10.2	1.2	15	32	320	8	13.5	
50	57.5	30	45	52.5	20.3	1.2	15	32	320	7	15	
55	57.5	30	45	52.5	20.3	1.2	15	32	320	7	15	
60	57.5	30	45	52.5	20.3	1.2	15	32	320	6	16	
65	57.5	35	50	52.5	20.3	1.2	15	32	320	5.5	16	
70	57.5	35	50	52.5	20.3	1.2	15	32	320	5	19	
75	57.5	35	50	52.5	20.3	1.2	15	32	320	4.5	19.5	
80	57.5	35	50	52.5	20.3	1.2	15	32	320	4	20	
90	57.5	35	60	52.5	20.3	1.2	15	32	320	4	21	
95	57.5	35	60	52.5	20.3	1.2	15	32	320	3	22	
100	57.5	35	60	52.5	20.3	1.2	15	32	320	2.5	23.5	
120	57.5	35	80	52.5	20.3	1.2	15	32	320	2.5	25	

气候类别 Climatic category 40/110/56/B
 工作温度范围 Operating temperature range -40°C ~ +110°C

损耗 (20°C)
 $0.1\mu F \leq C \leq 1\mu F$ $tg \leq 0.001$ (1K Hz)
 $1\mu F \leq C \leq 10\mu F$ $tg \leq 0.002$ (1K Hz)
 $C \geq 10\mu F$ $tg \leq 0.003$ (1K Hz)

电压范围 Voltage range 310 Vac, 50/60Hz 最大持续直流电压: 560VDC
 350 Vac, 50/60Hz 最大持续直流电压: 630VDC

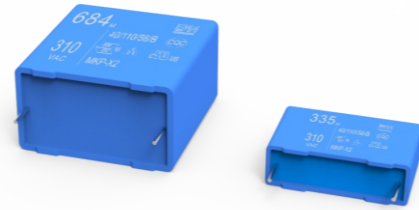
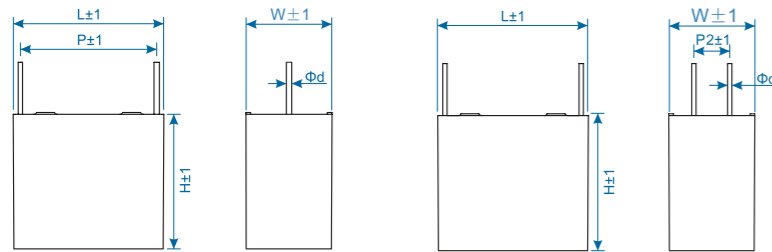
容量范围 Capacitance range 0.1μF ~ 25μF

容量允许偏差 Capacitance tolerance $\pm 5\%$ (J) / $\pm 10\%$ (K) / $\pm 20\%$ (M)

耐电压 withstanding voltage 4.3U_n 2S

绝缘电阻 Insulation resistance $C_n \leq 0.33 \mu F$, 15000 MΩ;
 $C_n > 0.33 \mu F$, 5000s

产品可通过THB1000h双85测试
 THB series are available upon request



常用规格 Dimension

U _r	C _r (μF)	Dimension(mm)				
		W	H	L	P	d
310Vac	0.10	6	12	18	15	0.6
	0.12	7.5	13.5	18	15	0.6
	0.15	7.5	13.5	18	15	0.6
	0.18	8.5	14.5	18	15	0.6
	0.22	9.5	15.5	18	15	0.6
	0.27	10	16	18	15	0.6
	0.33	11	19	18	15	0.6
	0.39	12.5	19	18	15	0.8
	0.47	12.5	21	18	15	0.8
	0.10	6	15	26.5	22.5	0.8
	0.12	6	15	26.5	22.5	0.8
	0.15	6	15	26.5	22.5	0.8
	0.18	6	15	26.5	22.5	0.8
	0.22	6	15	26.5	22.5	0.8
	0.27	6	15	26.5	22.5	0.8
	0.33	7	16	26.5	22.5	0.8
	0.39	8.5	17	26.5	22.5	0.8
	0.47	7	16.5	26.5	22.5	0.8
	0.56	7	16.5	26.5	22.5	0.8
	0.68	8.5	17	26.5	22.5	0.8
0.82	10	19	26.5	22.5	0.8	
1.0	10	19	26.5	22.5	0.8	
1.2	11	20	26.5	22.5	0.8	
1.5	12	22	26.5	22.5	0.8	
0.22	7	16	32	27.5	0.8	
0.33	7	16	32	27.5	0.8	
0.39	7	16	32	27.5	0.8	
0.47	9	18	32	27.5	0.8	
0.56	9	18	32	27.5	0.8	
0.68	9	18	32	27.5	0.8	
0.82	9	18	32	27.5	0.8	
1.0	9	18	32	27.5	0.8	
1.2	11	21	32	27.5	0.8	
1.5	11	23.5	32	27.5	0.8	

常用规格 Dimension

U _r	C _r (μF)	Dimension(mm)				
		W	H	L	P	d
350Vac	0.10	6	12	18	15	0.6
	0.12	7.5	13.5	18	15	0.6
	0.15	7.5	13.5	18	15	0.6
	0.18	8.5	14.5	18	15	0.6
	0.22	8	17.5	18	15	0.6
	0.27	11	16	18	15	0.6
	0.33	11	19	18	15	0.6
	0.39	12	20	18	15	0.8
	0.47	12	21	18	15	0.8
	0.10	6	15	26.5	22.5	0.8
	0.12	6	15	26.5	22.5	0.8
	0.15	6	15	26.5	22.5	0.8
	0.18	6	15	26.5	22.5	0.8
	0.22	7	16.5	26.5	22.5	0.8
	0.27	7	16.5	26.5	22.5	0.8
	0.33	8	17	26.5	22.5	0.8
	0.39	8.5	17	26.5	22.5	0.8
	0.47	8.5	17	26.5	22.5	0.8
	0.56	10	18.5	26.5	22.5	0.8
	0.68	10	18.5	26.5	22.5	0.8
0.82	11	20	26.5	22.5	0.8	
1.0	12	22	26.5	22.5	0.8	
1.2	13.5	24	26.5	22.5	0.8	
1.5	14.5	29.5	26.5	22.5	0.8	
0.22	9	18	32	27.5	0.8	
0.33	9	18	32	27.5	0.8	
0.39	9	18	32	27.5	0.8	
0.47	9	18	32	27.5	0.8	
0.56	10	20	32	27.5	0.8	
0.68	11	21	32	27.5	0.8	
0.82	11	21	32	27.5	0.8	
1.0	11	21	32	27.5	0.8	
1.2	13	22	32	27.5	0.8	
1.5	13	25	32	27.5	0.8	

常用规格 Dimension

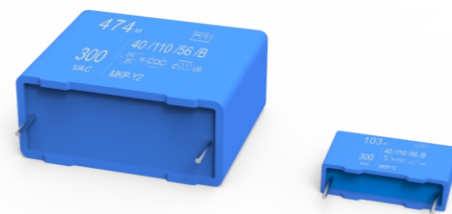
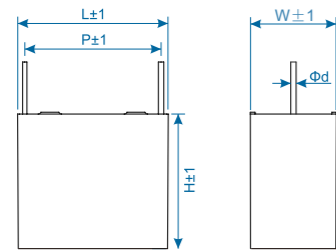
U _r	C _r (μF)	Dimension(mm)				
		W	H	L	P	d
310Vac	1.8	12.5	25	32	27.5	0.8
	2	12.5	25	32	27.5	0.8
	2.2	13	25	32	27.5	0.8
	2.7	14	28	32	27.5	0.8
	3.3	18	28	32	27.5	0.8
	3.9	18	33	32	27.5	0.8
	1.0	11	22	41.5	37.5	0.8
	1.2	11	22	41.5	37.5	0.8
	1.5	11	22	41.5	37.5	0.8
	1.8	13	24	41.5	37.5	0.8
	2	13	24	41.5	37.5	0.8
	2.2	13	24	41.5	37.5	0.8
	2.7	14	28	42	37.5	0.8
	3.3	14	28	42	37.5	0.8
	3.9	17	30	42	37.5	0.8
	4.7	17	30	42	37.5	0.8
	5.6	21	35	42	37.5	0.8
	6.8	21	35	42	37.5	0.8
	8.2	20	40	42	37.5	0.8
	10.0	25	38	42	37.5	0.8
10.0	26	38	58	52.5	0.8	
12.0	26	38	58	52.5	0.8	
15.0	27.5	40	58	52.5	0.8	
18.0	30	45	58	52.5	0.8	
20.0	30	45	58	52.5	0.8	

常用规格 Dimension

U _r	C _r (μF)	Dimension(mm)				
		W	H	L	P	d
350Vac	1.8	15	24.5	32	27.5	0.8
	2.2	18	28	32	27.5	0.8
	2.7	18	33	32	27.5	0.8
	3.3	21	31	32	27.5	0.8
	3.9	22	38	32	27.5	0.8
	4.7	22	38	32	27.5	0.8
	1.0	11	22	41.5	37.5	0.8
	1.2	11	22	41.5	37.5	0.8
	1.5	13	24	42	37.5	0.8
	1.8	13	24	42	37.5	0.8
	2.2	14	28	42	37.5	0.8
	2.7	14	28	42	37.5	0.8
	3.3	17	30	42	37.5	0.8
	3.9	20	40	42	37.5	0.8
	4.7	20	40	42	37.5	0.8
	5.6	20	40	42	37.5	0.8
	6.8	28	37	42	37.5	0.8
	8.2	24	44	42	37.5	0.8
	10.0	30	45	42	37.5	0.8
	10.0	30	45	57.5	57.5	0.8
12.0	30	45	57.5	57.5	0.8	
15.0	30	45	57.5	57.5	0.8	
18.0	35	50	57.5	57.5	0.8	
20.0	35	50	57.5	57.5	0.8	

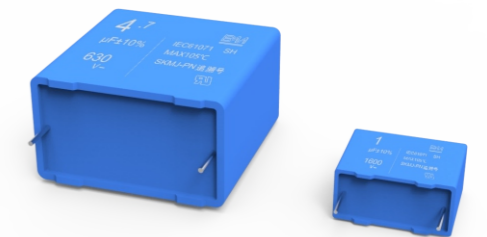
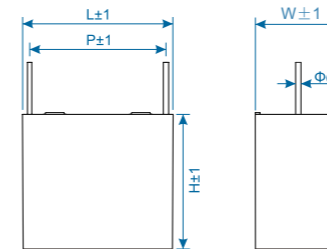
引用标准 Referenced standard IEC60384-14, AEC-Q200
 气候类别 Climatic category 40/110/56/B
 工作温度范围 Operating temperature range -40°C ~ +110°C
 损耗 (20°C) $tg\delta \leq 0.0015$ (1KHz)

电压范围 Voltage range 300Vac (50/60Hz) 最大持续直流电压: 1500VDC
 容量范围 Capacitance range 0.001 μ F - 1.0 μ F
 容量允许偏差 Capacitance tolerance $\pm 5\%$ (J) / $\pm 10\%$ (K) / $\pm 20\%$ (M)
 耐压 withstanding voltage $C_R \leq 0.33\mu F, 4000VDC 2S$;
 $C_R > 0.33\mu F, 3700VDC 2S$
 绝缘电阻 Insulation resistance $C_R \leq 0.33\mu F, 15000 M\Omega$;
 $C_R > 0.33\mu F, 5000s$



引用标准 Referenced standard GB/T 17702(IEC 61071), GB/T 10190(IEC 60384-16)
 气候类别 Climatic category AEC-Q200 40/105/56
 工作温度范围 Operating temperature range -40 ~ 85°C
 最高使用海拔 Max. altitude 2000m
 预期寿命 Lifetime expectancy 使用寿命: > 100 000 h (U_N 和 70°C)
 FIT: $< 10 \times 10^{-9}/h$ ($0.5 \times U_N, 40^\circ C$)
 失效率 Failure rate 50FIT

电压范围 Voltage range 630VDC (400Vac), 1100VDC(600Vac), 1600VDC(650Vac)
 容量范围 Capacitance range 0.01 μ F ~ 1.2 μ F
 容量允许偏差 Capacitance tolerance $\pm 5\%$ (J) / $\pm 10\%$ (K) / $\pm 20\%$ (M)
 介质损耗角正切值 $tg\delta_0 \leq 0.0002$ (100Hz, 20°C $\pm 10^\circ C$)
 耐压 withstanding voltage 1.6 U_N 5s
 $C_N \leq 0.33\mu F, IR \geq 100G\Omega$;
 $C_N > 0.33\mu F, RC \geq 30000s$
 过电压 Over voltage 1.1 U_N 30% of on-load-dur
 1.15 U_N 30min/day
 1.2 U_N 5min/day
 1.3 U_N 1min/day



常用规格 Dimension

U_R	C_R (μF)	Dimension(mm)				
		W	H	L	P	d
300Vac	0.001	4	9	13	10	0.6
	0.0012	4	9	13	10	0.6
	0.0015	4	9	13	10	0.6
	0.0018	4	9	13	10	0.6
	0.0022	4	9	13	10	0.6
	0.0027	4	9	13	10	0.6
	0.0033	4	9	13	10	0.6
	0.0039	5	11	13	10	0.6
	0.0047	5	11	13	10	0.6
	0.0056	5	11	13	10	0.6
	0.0068	5	11	13	10	0.6
	0.0082	6	12	13	10	0.6
	0.01	5	11	18	15	0.6
	0.012	5	11	18	15	0.6
	0.015	5	11	18	15	0.6
	0.018	6	12	18	15	0.8
	0.022	6	12	18	15	0.8
	0.027	7.5	13.5	18	15	0.8
	0.033	7.5	13.5	18	15	0.8
	0.1	9	18	32	27.5	0.8
	0.12	9	18	32	27.5	0.8
	0.15	9	18	32	27.5	0.8
	0.18	11	21	32	27.5	0.8
	0.22	11	21	32	27.5	0.8
0.27	13	22	32	27.5	0.8	
0.33	15	24.5	32	27.5	0.8	
0.39	15	24.5	32	27.5	0.8	
0.47	18	28	32	27.5	0.8	
0.56	18	28	32	27.5	0.8	
0.68	21	31	32	27.5	0.8	
0.82	22	37	32	27.5	0.8	
1	22	37	32	27.5	0.8	

常用规格 Dimension

U_R	C_R (μF)	Dimension(mm)				
		W	H	L	P	d
300Vac	0.039	8.5	14.5	18	15	0.8
	0.047	8.5	14.5	18	15	0.8
	0.056	10	16	18	15	0.8
	0.068	10	16	18	15	0.8
	0.082	11	19	18	15	0.8
	0.033	6	15	26.5	22.5	0.8
	0.039	6	15	26.5	22.5	0.8
	0.047	6	15	26.5	22.5	0.8
	0.056	6	15	26.5	22.5	0.8
	0.068	7	16.5	26.5	22.5	0.8
	0.082	7	16.5	26.5	22.5	0.8
	0.1	8.5	17	26.5	22.5	0.8
	0.12	10	19	26.5	22.5	0.8
	0.15	10	19	26.5	22.5	0.8
	0.18	11	20	26.5	22.5	0.8
	0.22	12	22	26.5	22.5	0.8
	0.27	13.5	23	26.5	22.5	0.8
	0.33	14.5	29.5	26.5	22.5	0.8
	0.39	14.5	29.5	26.5	22.5	0.8
	0.33	11	22	42	37.5	1.0
	0.39	13	24	42	37.5	1.0
	0.47	14	28	42	37.5	1.0
	0.56	17	30	42	37.5	1.0
	0.68	20	40	42	37.5	1.0
0.82	20	40	42	37.5	1.0	
1	20	40	42	37.5	1.0	

常用规格 Dimension

U_N	C_N (μF)	Dimension(mm)				
		L	B	H	P	d
$U_N, 85^\circ C: 630VDC$	0.01	13	5	11	10	0.6
	0.012	13	5	11	10	0.6
	0.015	13	6	12	10	0.6
	0.018	13	6	12	10	0.6
	0.01	18	5	11	15	0.8
	0.012	18	5	11	15	0.8
	0.015	18	7.5	17.5	15	0.8
	0.018	18	5	11	15	0.8
	0.022	18	5	11	15	0.8
	0.027	18	5	11	15	0.8
	0.033	18	6	12	15	0.8
	0.039	18	6	12	15	0.8
$U_{max}, 85^\circ C: 400Vac$	0.047	18	6	12	15	0.8
	0.056	18	7.5	13.5	15	0.8
	0.068	18	8.5	14.5	15	0.8
	0.082	18	8.5	14.5	15	0.8
	0.1	18	10	16	15	0.8
	0.12	18	11	19	15	0.8
	0.047	26.5	6	15	22.5	0.8
	0.056	26.5	6	15	22.5	0.8
	0.068	26.5	6	15	22.5	0.8
	0.082	26.5	6	15	22.5	0.8

常用规格 Dimension

U_N	C_N (μF)	Dimension(mm)					
		L	B	H	P	d	
$U_N, 85^\circ C: 1100VDC$	0.01	18	5	11	15	0.8	
	0.012	18	5	11	15	0.8	
	0.015	18	5	11	15	0.8	
	0.018	18	7.5	13.5	15	0.8	
	0.022	18	6.3	13	15	0.8	
	0.027	18	7.5	14.5	15	0.8	
	0.033	18	8.5	14.5	15	0.8	
	0.039	18	10	16	15	0.8	
	0.047	18	12.5	21	15	0.8	
	0.068	18	12.5	21	15	0.8	
	$U_{max}, 85^\circ C: 600Vac$	0.027	26.5	6	15	22.5	0.8
		0.033	26.5	6	15	22.5	0.8
0.039		26.5	6	15	22.5	0.8	
0.047		26.5	7	16.5	22.5	0.8	
0.056		26.5	7	16.5	22.5	0.8	
0.068		26.5	8.5	17	22.5	0.8	
0.082		26.5	10	19	22.5	0.8	
0.1		26.5	10	19	22.5	0.8	
0.12		26.5	12	22	22.5	0.8	
0.15		26.5	12	21.5	22.5	0.8	
0.1		32	9	18	27.5	0.8	

常用规格 Dimension						
U _n	C _n (μF)	Dimension(mm)				
		L	B	H	P	d
U _n , 85°C: 630VDC U _{rms} , 85°C: 400Vac	0.1	26.5	8.5	17	22.5	0.8
	0.12	26.5	7	16.5	22.5	0.8
	0.15	26.5	8.5	17	22.5	0.8
	0.18	26.5	8.5	17	22.5	0.8
	0.22	26.5	10	19	22.5	0.8
	0.27	26.5	12	22	22.5	0.8
	0.33	26.5	12	22	22.5	0.8
	0.39	26.5	12	22	22.5	0.8
	0.15	32	9	18	27.5	0.8
	0.18	32	9	18	27.5	0.8
U _n , 85°C: 1100VDC U _{rms} , 85°C: 600Vac	0.22	32	9	18	27.5	0.8
	0.27	32	9	18	27.5	0.8
	0.33	31	11	20	27.5	0.8
	0.39	32	11	20	27.5	0.8
	0.47	32	13	22	27.5	0.8
	0.56	32	15	22	27.5	0.8
	0.68	32	14	24.5	27.5	0.8
	0.82	32	14	28	27.5	0.8
	1	32	18	33	27.5	0.8
	1.2	32	18	33	27.5	0.8

常用规格 Dimension						
U _n	C _n (μF)	Dimension(mm)				
		L	B	H	P	d
U _n , 85°C: 1100VDC U _{rms} , 85°C: 600Vac	0.12	32	11	20	27.5	0.8
	0.15	32	11	20	27.5	0.8
	0.18	32	13	22	27.5	0.8
	0.22	32	13	22	27.5	0.8
	0.27	32	15	24.5	27.5	0.8
	0.33	32	14	25	27.5	0.8
	0.39	32	18	33	27.5	0.8
	0.47	32	17	28	27.5	0.8
	0.68	32	18	28	27.5	0.8
	0.01	18	6	12	15	0.8
U _n , 85°C: 1600VDC U _{rms} , 85°C: 650Vac	0.012	18	7.5	13.5	15	0.8
	0.015	18	7.5	13.5	15	0.8
	0.018	18	8.5	14.5	15	0.8
	0.022	18	10	18	15	0.8
	0.027	18	10	16	15	0.8
	0.033	18	11	19	15	0.8
	0.015	26.5	7	16.5	22.5	0.8
	0.018	26.5	6	15	22.5	0.8
	0.022	26.5	8.5	17	22.5	0.8
	0.027	26.5	6	15	22.5	0.8
	0.033	26.5	7	16.5	22.5	0.8
	0.039	26.5	8.5	17	22.5	0.8
	0.047	26.5	12	21.5	22.5	0.8
	0.056	26.5	10	19	22.5	0.8
	0.068	26.5	11	20	22.5	0.8
	0.082	26.5	12	22	22.5	0.8
	0.1	26.5	12	21.5	22.5	0.8
	0.039	32	9	18	27.5	0.8
	0.047	32	9	18	27.5	0.8
	0.056	32	9	18	27.5	0.8
	0.068	32	9	18	27.5	0.8
	0.082	32	11	20	27.5	0.8
	0.1	32	11	23.5	27.5	0.8
	0.12	32	13	22	27.5	0.8
	0.15	32	15	24.5	27.5	0.8
	0.18	32	15	24.5	27.5	0.8
	0.22	32	18	33	27.5	0.8
	0.27	32	18	33	27.5	0.8
	0.33	32	18	33	27.5	0.8

引用标准 Referenced standard GB/T17702, IEC61071, AEC-Q200
 气候类别 Climatic category 40/105/56
 工作温度范围 Operating temperature range -40 ~ 105°C (θ_{hotspot} ≤ 105°C)
 存储温度范围 Storage temperature range -40 ~ 105°C
 预期寿命 Lifetime expectancy 100 000h(U_n, θ_{hs} ≤ 70°C)

电压范围 Voltage range 250V.DC~1200V.DC
 容量范围 Capacitance range 10μF~2000μF
 容量允许偏差 Capacitance tolerance ±5% (J) / ±10% (K) / ±20% (M)
 失效率 Failure rate 50FIT



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