

## 金属化薄膜电容

### Metalized Film Capacitor

马达运转电容  
型号: MKPS

日期: 2024.01.22  
版本: 1

Motor Run Capacitor  
Type: MKPS

Date: 2024.01.22  
Version: 1



**结构**

金属化聚丙烯安全膜  
塑壳 UL94 V-1 以上  
环氧树脂

**Constructions**

Metalized polypropylene film  
Plastic can  
Epoxy Resin

**特性**

良好的自愈特性  
低损耗  
安全膜防爆型  
高绝缘电阻  
环保

**Features**

Self-healing  
Low dissipation factor  
Explosion-proof type  
High insulation resistance  
Environmentally friendly

**应用**

一般的正弦交流应用，主要是马达运转

**Application**

For general since wave application, mainly as motor run

**端子**

187#/250# (1+1) / (2+2)  
导线，线径 0.5mm<sup>2</sup> 以上

**Terminals**

187#/250# (1+1) / (2+2) Fast-on  
Insulated copper wire, 0.5mm<sup>2</sup> min

**安装**

中耳

**Mounting parts**






Ear

**技术资料**

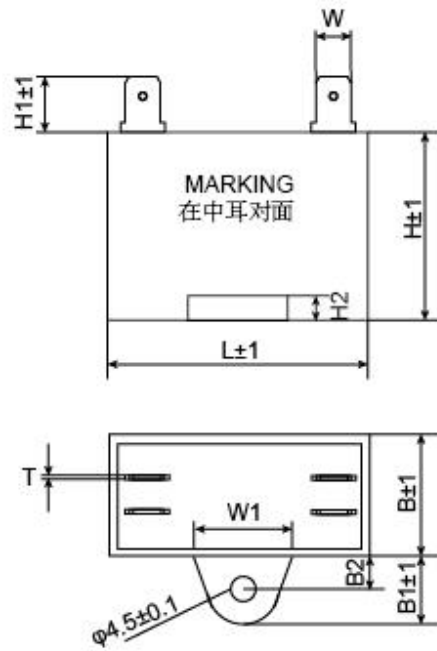
参照标准	GB / T3667.1-2016 ; IEC60252-1 ; UL810
安全等级	S3
预期寿命	Class B (10000h)
额定电压 $U_N$	250VAC;450VAC
额定容量 $C_N$	见表格
容量偏差	±5% (J)
额定频率 f	50/60Hz



测试	
外观检查	外壳无变形，表面无污物，印字清洗；引出电极无氧化。
尺寸检查	安装及外形尺寸符合要求。
容量	$C_N \pm 5\%$
损耗角正切值 $\tan \delta$	$\leq 30 \times 10^{-4} @ 1\text{KHz}, 20^\circ\text{C}$
极间 T-T (两电极之间)	$2U_N \text{ 2s}$
极壳 T-C (电极与外壳之间)	$2500\text{VAC 2s}$
绝缘电阻 IR	$10000\text{s}@20^\circ\text{C}$ ，湿度小于 65%
耐久试验	$1000\text{h}@1.35U_N, 85^\circ\text{C}$
破坏试验	$1.3U_N + 10U_{\text{NDC}}$ (200V/min 升压) 电容 $< 1\% C_N$
最大电压爬升速率 dv/dt	$10\text{V}/\mu\text{s}$
湿热测试时间	21 天

认证	
	E315415 PROTECTED 10,000AFC 450VAC, 1-25 $\mu\text{F}$ , 85 $^\circ\text{C}$
	250VAC, 2-30 $\mu\text{F}$ , Class B, 85 $^\circ\text{C}$ 450VAC, 2-30 $\mu\text{F}$ , Class B, 85 $^\circ\text{C}$
	250VAC, 2-30 $\mu\text{F}$ , Class B, 85 $^\circ\text{C}$ 450VAC, 2-30 $\mu\text{F}$ , Class B, 85 $^\circ\text{C}$
	Compliance to LV directive 2014/35/EU
	RoHS 2.0





印字信息（激光印字）



MKPS	产品型号
	自愈符号
S3	安全等级
3μF±5%	额定容量及偏差
450VAC	额定电压
B	预期寿命等级
50/60Hz	额定频率
40/85/21	气候类别
RoHS	环保
Lot No.	生产批号
Part No.	产品编号

规格表

电压 VAC	容量 μF	长*宽*高 L*B*H	品号 Part No.	认证	
250	1	37*14*28	S25001XX	UL	
	2	37*14*28	S25002XX	UL/TUV/CQC	
	3	37*14*28	S25003XX	UL/TUV/CQC	
	4	38*19*31/38*18.5*29	S25004XX	UL/TUV/CQC	
	5	38*19*31	S25005XX	UL/TUV/CQC	
	6	37*22*34	S25006XX	UL/TUV/CQC	
	7	37*22*34	S25007XX	UL/TUV/CQC	
	8	47*18*34	S25008XX	UL/TUV/CQC	
	9	47*22*34	S25009XX	UL/TUV/CQC	
	10	47*22*34	S25010XX	UL/TUV/CQC	
	11	47*24*36	S25011XX	UL/TUV/CQC	
	12	47*24*36	S25012XX	UL/TUV/CQC	
	13	47*24*36	S25013XX	UL/TUV/CQC	
	14	47*26*38	S25014XX	UL/TUV/CQC	
	15	47*26*38	S25015XX	UL/TUV/CQC	
	16	47*32*40	S25016XX	UL/TUV/CQC	
	17	47*32*40	S25017XX	UL/TUV/CQC	
	18	47*32*40	S25018XX	UL/TUV/CQC	
	19	47*32*40	S25019XX	UL/TUV/CQC	
	20	58*28*40	S25020XX	UL/TUV/CQC	
	21	58*28*40	S25021XX	UL/TUV/CQC	
	22	58*28*40	S25022XX	UL/TUV/CQC	
	23	58*30*44	S25023XX	UL/TUV/CQC	
	24	58*30*44	S25024XX	UL/TUV/CQC	
	25	58*30*44	S25025XX	TUV/CQC	
	26	58*30*44	S25026XX	TUV/CQC	
	27	58*30*44	S25027XX	TUV/CQC	
	28	58*30*44	S25028XX	TUV/CQC	
	29	57*39*50	S25029XX	TUV/CQC	
	30	57*39*50	S25030XX	TUV/CQC	



电压 VAC	容量 μF	长*宽*高 L*B*H	品号 Part No.	认证	
450	1	37*14*28	145001XX	UL	
	2	38*19*31	145002XX	UL/TUV/CQC	
	3	37*22*34	145003XX	UL/TUV/CQC	
	4	47*22*34	145004XX	UL/TUV/CQC	
	5	47*22*34	145005XX	UL/TUV/CQC	
	6	47*24*36	145006XX	UL/TUV/CQC	
	7	47*26*38	145007XX	UL/TUV/CQC	
	8	58*25*39	145008XX	UL/TUV/CQC	
	9	58*25*39	145009XX	UL/TUV/CQC	
	10	58*28*40	145010XX	UL/TUV/CQC	
	11	58*28*40	145011XX	UL/TUV/CQC	
	12	58*30*44	145012XX	UL/TUV/CQC	
	13	58*30*44	145013XX	UL/TUV/CQC	
	14	57*39*50	145014XX	UL/TUV/CQC	
	15	57*39*50	145015XX	UL/TUV/CQC	
	16	57*39*50	145016XX	UL/TUV/CQC	
	17	57*39*50	145017XX	UL/TUV/CQC	
	18	57*39*50	145018XX	UL/TUV/CQC	
	19	57*39*50	145019XX	UL/TUV/CQC	
	20	57*39*50	145020XX	UL/TUV/CQC	
	21	57*39*50	145021XX	UL/TUV/CQC	
	22	57*39*50	145022XX	UL/TUV/CQC	
	23		145023XX	UL/TUV/CQC	
	24		145024XX	UL/TUV/CQC	
	25		145025XX	UL/TUV/CQC	



## 使用条件

海拔：不超过 2,000 m	Recommended to use under altitude 2000m.
污秽：在轻度污秽的大气下运行	Defilement:best operating under mildly polluted atmosphere.
运行温度：-40℃ ~ +85℃	Operating temperature: -40℃~+85℃
最高允许过电压：1.1Un	Maximum allowable voltage: 1.1Un
最大允许电流：1.3In	Maximum allowable current: 1.3In
最大允许无功容量：1.35Qn	Maximum allowable reactive power capacity: 1.35Qn

## 储存环境

电容器应贮存在温度为-10℃到+40℃、相对湿度不大于 70%RH、周围空气中无酸碱性及其他有害杂质的库房中。

Capacitors should be stored in a warehouse where the temperature is -10℃ to +40℃, the relative humidity is not greater than 70%RH, and the surrounding air is free of acid, alkali and other harmful impurities.

## 使用期限

建议出厂 1 年内装机使用；超过 1 年未装机，建议复测合格后再使用；超过 2 年未装机使用，不建议使用；为确保电容在最佳状态下运行，电容器使用到标称寿命时间后，请更换电容器。

It is recommended to install within 1 year from the factory; It has not been installed for more than 1 year, it is recommended to use after re-testing; Not recommended if it has not been used for more than 2 years; To ensure optimum operation of the capacitor, replace the capacitor after it has reached its nominal life time.

## 预期寿命

电容器在应用中，有多种因素会影响到电容器的使用寿命，如电压、电流、温度、湿度、谐波、辐射、海拔以及一些其它未知因素。预期寿命仅仅是考虑电压、温度的影响关系，基于长期耐久性试验的合格结果，再通过预期寿命理论计算公式计算该电容在不同工况下的预期寿命。因此，预期寿命仅作为选型参考，而不代表质保要求。

In the application of capacitors, there are many factors that will affect the service life of capacitors, such as voltage, current, temperature, humidity, harmonics, radiation, altitude and some other unknown factors. The expected life of the capacitor under different working conditions is calculated based on the qualified results of the long-term durability test, considering the influence of



voltage and temperature. Therefore, life expectancy is only used as a reference for selection and does not represent a warranty requirement.

## 电噪声

因薄膜振动产生的嗡鸣声是不可避免的，这是由于电容器薄膜受到两电极间库仑力的作用产生的振动而发出的声音。施加的电压和频率波形失真越严重，产生的嗡鸣声越大。但这种嗡鸣声对电容器不会产生任何破坏作用。

The buzz generated by the film vibration is unavoidable and is the sound produced by the vibration of the capacitor film under the action of the coulomb force between the two electrodes. The more distorted the applied voltage and frequency waveform, the greater the buzz. But this buzz does not cause any damage to the capacitor.

## 安装拆卸

电容器的安装应便于以对流和辐射来散发由电容器损耗所产生的热量。电容器安装盒使用过程中应避免接触到油（否则须定购采用耐油材料设计生产的耐油耐高温电容）。

Capacitors shall be installed so that the heat generated by capacitor loss can be dissipated by convection and radiation. The capacitor mounting box should avoid contact with oil during use (otherwise, oil-resistant and high-temperature capacitors designed and produced with oil-resistant materials must be ordered).

安装及拆卸时应对电容两极进行放电，以免人体与电容两极形成回路触电。放电时请远离易燃易爆物。短路放电易损伤电容器，且会产生火花及响声。不可大力拉扯电容器电极引出端。禁止碰触运行中或设备停机后未放电的电容器。请勿自行拆解电容。

The capacitor poles should be discharged during installation and disassembly to avoid electric shock between the human body and the capacitor poles. Keep away from flammable and explosive materials when discharging. Short-circuit discharge is easy to damage the capacitor, and will produce sparks and sound. Do not pull the capacitor electrode outlet vigorously. Do not touch capacitors that are not discharged during operation or after the equipment is shut down. Do not disassemble the capacitor yourself.

## 环保声明

电容器原材料物质含量符合欧盟 RoHS 2.0 指令的限值要求。

The material content of the container meets the limit requirements of the EU RoHS 2.0 directive.

