



规格承认书

SPECIFICATION FOR APPROVAL

产品名称 Product Name	高频交流滤波电容 Heavy-Duty AC filter capacitor
客户产品型号 Customer Specification	---
客户产品编码 Customer Part No.	---
胜业产品型号 Sheng Ye Specification	FFC3SY 525-40
胜业产品编码 Sheng Ye Part No.	L0525F0400UJD1AFL2P

厂商认可

客户名称 Customer	Platan LLC
客户确认 APPROVED	

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1、产品特性 Product Features

- 可承受高有效值电流、高峰值电流 High Irms rating/ High Ipeak rating
- 自感低 Low self-inductance
- 可靠性高，使用寿命长 High reliability and long life expectancy
- 有自愈特性，采用金属化聚丙烯膜设计 Design of metallized polypropylene film with self-healing property
- 无极性介质 Non-polar

2、技术参数 Technical parameters

引用标准 Reference standard	IEC61071
工作温度范围 Operation temperature range	-40°C ~ 70°C
存储温度范围 Storage temperature range	-40°C ~ 85°C
阻燃等级 Flame retardant grade	UL94-V0
额定电压(Urms)	Urms=525Vac
额定电容量 (Cn)	3*40μF (25°C,100Hz) , Delta connection
电容量允许偏差 Tolerance	±5% (J)
耐电压 Withstand voltage	Ut-t 2.15Urms (10s , 25°C)
	Ut-c 3600VAC(2s , 50/60Hz , 25°C)
损耗角正切 Loss angle of the capacitor tanδ	≤0.0010 (25°C , 100Hz)
介质损耗角正切 Dielectric loss factor tanδ ₀	2×10 ⁻⁴
等效串联电感 (ESL)	≤100nH(1MHz , 25°C)
等效串联电阻 (ESR)	≤3.0mΩ(10KHz , 25°C)
最大峰值电流 (Ipeak)	0.8kA
最大冲击电流 (Is)	2.4kA
热阻 Rth	4.0°C/W hot-spot/Amb
有效值电流 Imax	30A @45°C
过电压 Overvoltage	1.1Urms (30% of on_load_duration)
	1.15Urms (30min/day)
	1.2Urms (5min/day)
	1.3Urms (1min/day)
	1.5Urms (30ms every time , 1000times during the life of the capacitor)



灌封料 Impregnation	Oil
介质 Dielectric	金属化聚丙烯薄膜 Polypropylene film
工作最高海拔 Altitude	≤2000m
失效率 Failure rate	≤100FIT
预期寿命 Life expectancy	≥100,000h (U_n , $T_h \leq 70^\circ\text{C}$)

备注 : Remarks:

1) * θ_{ambient} : 电容器周围温度, 测试点为距离外壳 10cm 并且高度为电容器高度 2/3 的位置。

The temperature around the capacitor is 10 cm away from the shell and 2/3 of the height of the capacitor.

2) *ESR : 一个有效电阻, 当串联连接于一个理想电容器、其电容值与所探讨的电容器的电容值相等时, 在规定运行条件下, 其产生的损耗功率与电容器内消耗的有功功率相等。

An effective resistor, when connected in series to an ideal capacitor and its capacitance value is equal to the capacitance value of the capacitor discussed, generates the same loss power as the active power consumed in the capacitor under specified operating conditions.

$$\theta_{\text{hotspot}} \approx \theta_{\text{ambient}} + I_{\text{rms}}^2 \times \text{ESR} \times R_{\text{th}}$$

3) * T_h : 产品核心温度 Product Core Temperature

3、产品代码说明 Part No. Description

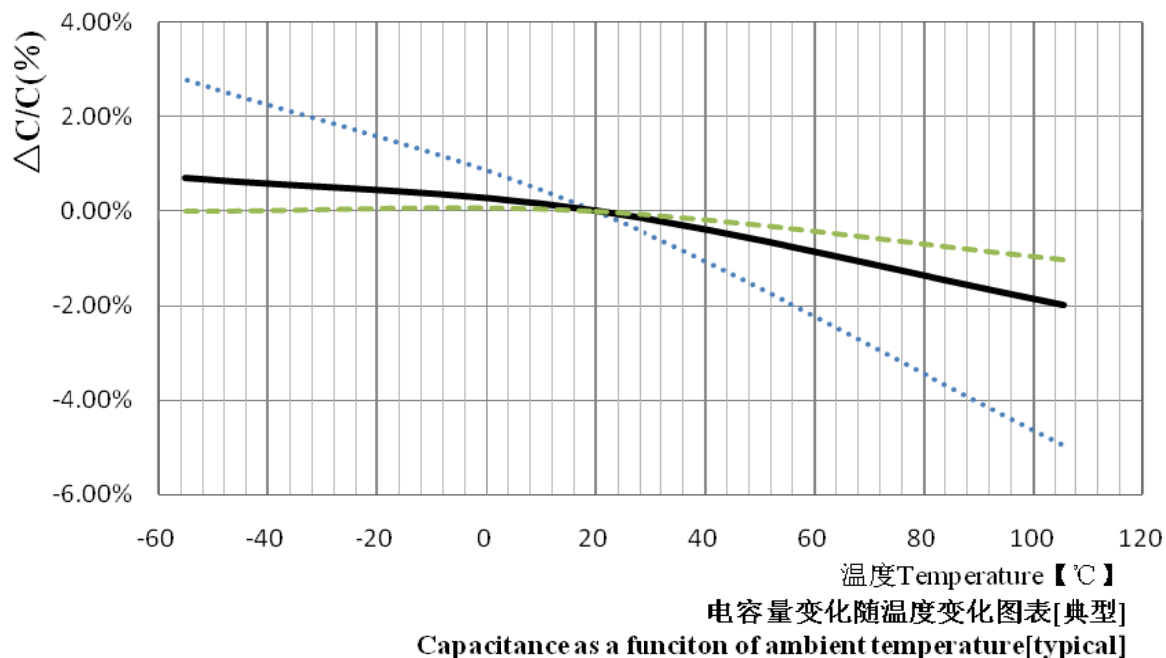
1	2-5	6	7-10	11	12	13	14	15	16	17	18	19
Series	U_n	Type	Cn	Cn unit	Tolerance	Connection	Case	Terminal	Φ	H	Filling	Protection
L	0525	F	0400	U	J	N	1	A	F	L	2	P
FFC3	Vrms	AC filter	40×10^{-6}	μF	±5%	Single Phase	Al.	A	Φ86	240	Oil	Over-pressure

4、电容器使用海拔高度与电流降额系数的关系**The current de-rating against altitude**

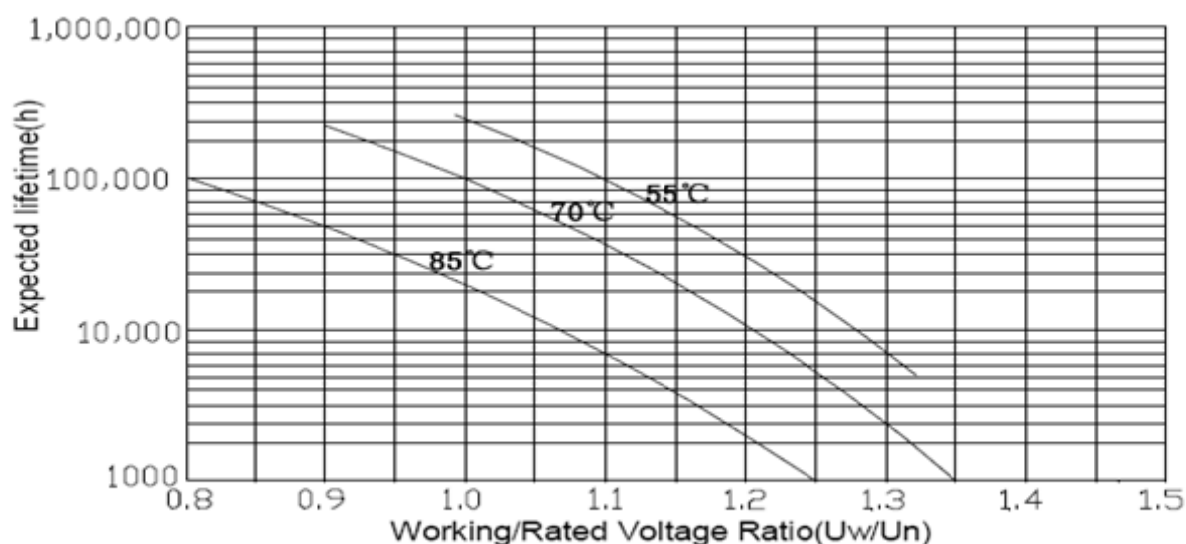
海拔高度 Altitude	电流降额系数 Current de-rating factor
2500m	0.96
3000m	0.92
3500m	0.87
4000m	0.81

5、特征图表 Feature graph

5.1 电容量随环境温度变化曲线 The graph of Capacitance VS Ambient Temperature



5.2 预期寿命曲线 The graph of Life expectancy



备注：此处温度为产品核心温度(T_{hotspot})

Remark: The temperature in this graph is the hotspot temperature of the capacitor.



6、包装和运输 Packaging and transportation

包装好的电容器允许任何运输方式，但是要避免接触雨水，雪和机械损伤。

The packed capacitors can be transported by any way. But should avoid mechanical damage and keep away from rain and snow.

7、注意事项 Matters needing attention

7.1 该电容器没有内置电阻，所以电容器内部可能会残留致命的电荷，使用前请先用电阻放电，不允许使用短路线直接放电，电容器不使用时需短接两极端子防止电荷残留。

There's no internal discharge resistor in this capacitor. Lethal electric power may remain inside. Please discharge it by resistor before using. Direct discharge by short-circuit is not permitted.

7.2 定期检查电容端子的松紧程度。

Check the tightness of the capacitor connection regularly.

7.3 产品要求室内垂直固定安装，禁止水平安装；

The product requires vertical fixed installation indoors and horizontal installation is prohibited;

7.4 接线端子使用软线连接，禁止使用硬铜排安装

Use soft wires to connect terminal blocks, and it is prohibited to use hard copper bars for installation.

7.5 产品在粉尘较多的环境中，需定期维护和清洁电极间的粉尘，避免两极之间短路。

Permitted installation environment grade is pollution grade III; in the environment with more dust, When the capacitor be used in the dusty environment, regularly cleaning of the dusty on the terminals is necessary, to avoid occur of short circuit between terminals.

7.6 如果电容器有超过 1mm 深的凹坑或其他机械损伤，请不要使用该电容器。

Do not use the capacitor if it has pits or other mechanical damage more than 1mm deep.

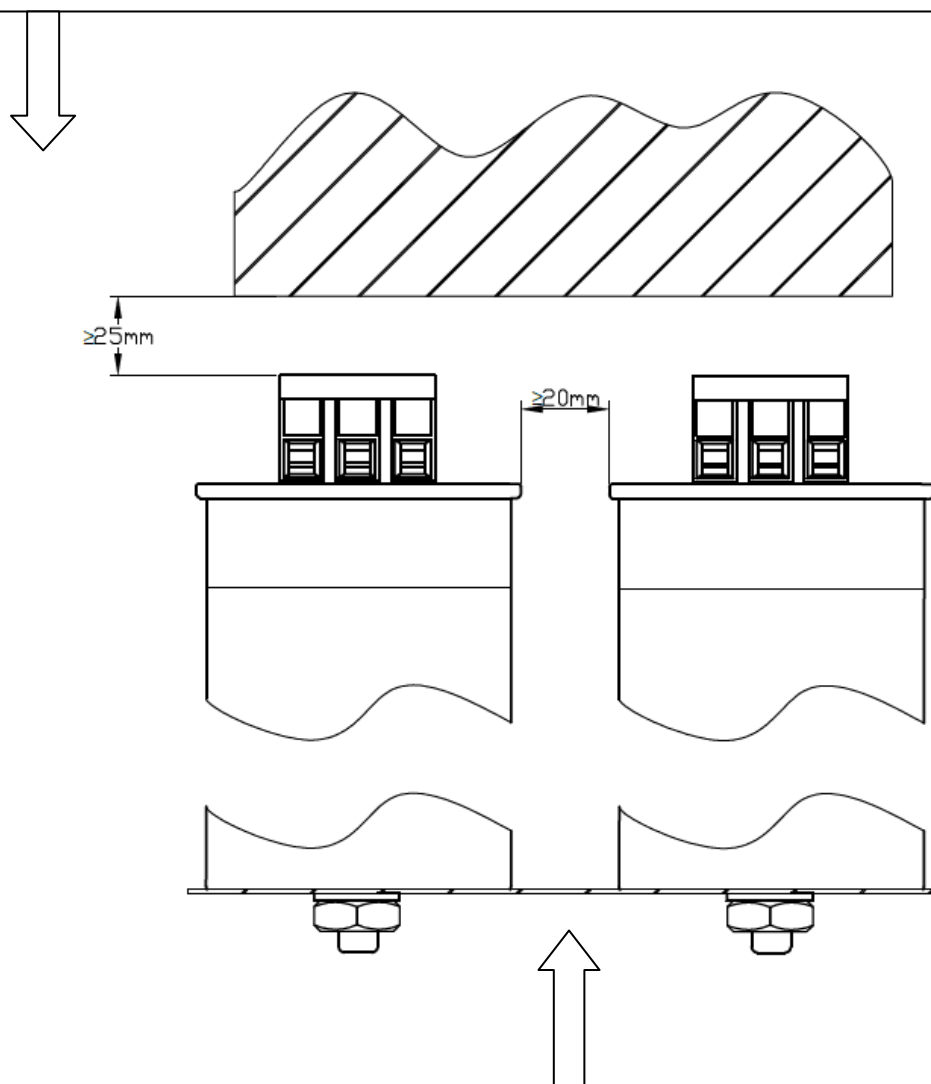
7.7 有任何疑问或者需要更多详细的信息，请随时联系我们的技术服务部门。If there's any questions or need more detailed information, please feel free to contact our technical services department

8、安装指引 Guide on installation

8.1 安装空间要求 Installation space requirements

电容失效时，内部过压防爆装置动作，会使电容顶端鼓胀。此处需至少预留 25mm 空间。另外只可使用有弹性的铜带或软导线连接。

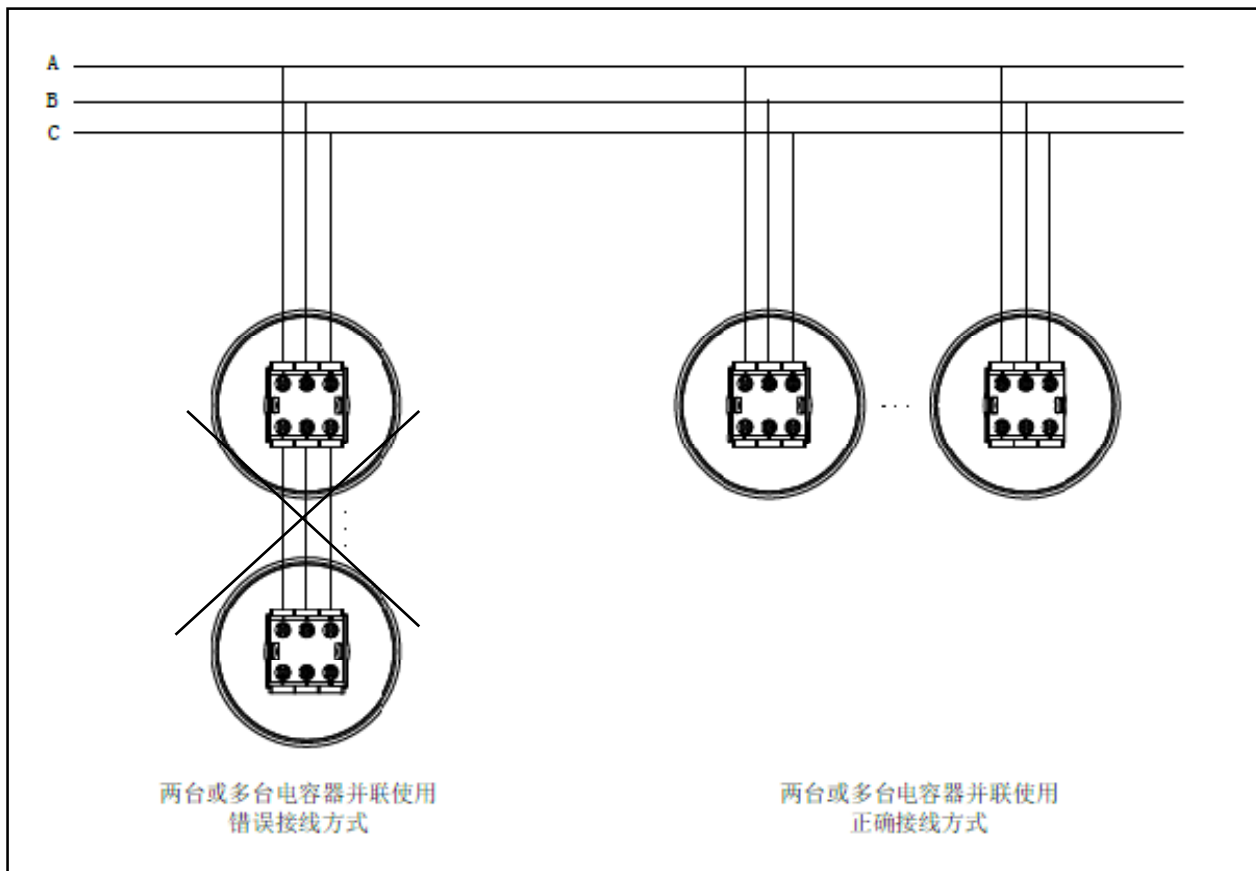
In the event of failure, the overpressure disconnection inside the capacitor works, which cause expansion of the can (especially on the top). This space must be at least 25mm. In additional, connect with elastic copper bands or flexible cables only.



两电容器之间间隙不小于 20mm，有利于散热。

For a better cooling, the distance between 2 capacitors should at least 20mm.

8.2 接线指引 | Connection of lead wires



当多台电容并联时，每个电容器应直接连接到母线上，如需其他连接方式，请提前联系我司。
When several pcs capacitors connected in parallel, each capacitor should use independent lead wires. If need to connect by other way, please contact other in advance.



9、产品图纸 Product outline drawing

FFC3SY										
Material regist										
CAD										
Check										
Former diagram NO.										
Diagram NO.							Order. NO		SHENG YE	
							FFC3SY 525-40			
Signature	Symbol	Amount	Zone	Doc. NO	Signature	Date			Platan	
	Design	Zhu	2023-12-23	Standard	Zhu	2023-12-23	Design Phases	Weight	Scale	
Date	Drawing	Zhu	2023-12-23							Ver
	Auditing	Shen	2023-12-23							A
	Technics	Li	2023-12-23	Approved	Luo	2023-12-23	Top Page		Page	