规 格 承 认 书

SPECIFICATIONFOR APPROVAL

产品名称 Product Name	直流支撑电容 DCL-LINK 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	C30-DCLSY 1100-750
胜业产品编码 Sheng Ye Part No.	I1100L7500UJN1BIU3N

厂商认可

客户名称 Customer	
客户确认 APPROVED	

胜业股份电气有限公司 ShengYe Electric Co.,ltd			
拟制： DRAWN 刘俊文	审核： CHECK 梁梓谨	批准： APPROVED 罗杰峰	日期 Issue Date 2023/12/27

胜业电气股份有限公司 PEC技术部 SHENGYE ELECTRIC CO.,LTD

胜业电气股份有限公司 Sheng Ye Electric Co.,ltd

地址：广东省佛山市顺德区伦教新熹四路四号

Add：LunjiaoXinxi4th Road, Shunde,FoshanCity ,Guangdong PR.China

TEL：0086-757-27830197FAX：0086-757-27830135

Mail：pec.en1@shengye.com Web: www.shengye.com

版本更新记录 Version update records				
现有版本 Version	前版本 Original Version	日期 Date	编写者 Drawn	更改内容 Description
A 版	---	2023-12-27	刘俊文	

目录 content

1、产品特性 Product Features.....4
2、技术参数 Technical parameters.....4
3、产品代码说明 Part No. Description.....5
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.....5
5、特征图表 Feature graph.....5
5.1 电容量随环境温度变化曲线 The graph of Capacitance VS Ambient Temperature.....5
5.2 绝缘电阻随环境温度变化曲线 The graph of insulation resistance (RC) VS Ambient temperature.....6
5.3 阻抗随频率变化曲线（典型值） The graph of Impedance VS Frequency (typical value)6
5.4 预期寿命曲线 The graph of Life expectancy.....7
6、测试项目 Test items.....7
6.1 出厂试验 Routine tests.....7
6.2 型式试验 Type Tests (IEC61071-2007 / GB17702-2013).....8
7、包装和运输 Packaging and transportation.....9
8、注意事项 Matters needing attention.....9
9、产品图纸 Product outline drawing.....10

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	IEC61071-2007 / GB17702-2013
工作温度范围 Working temperature range	-40℃～85℃
存储温度范围 Storage temperature range	-40℃～85℃
阻燃等级 Flame retardant grade	UL94-V0
额定电压 Rated voltage (Undc)	1100VDC
额定电容量 Rated capacitance（Cn）	750uF（25℃,100Hz）
电容量允许偏差 Capacitance Tolerance	±5%（J）
耐电压 Withstand voltage	Ut-t 1.5Undc（10s，25℃）
	Ut-c 4000VAC (10s，50Hz，25℃)
损耗角正切 Loss angle of the capacitortanδ	≤0.0020（25℃，100Hz）
介质损耗角正切 Dielectric loss factor tanδ0	2×10^{-4}
绝缘电阻 Insulation resistance	＞15000s (500VDC, 60s, 25℃)
等效串联电感（ESL）	≤60nH(1MHz，25℃)
等效串联电阻（ESR）	≤1.6mΩ
热阻 Rth	3.6 K/W
有效值电流 Irms	Imax=80Arms (40℃)
过电压 Overvoltage	1.1UN（30% of on_load_duration）
	1.15UN（30min/day）
	1.2UN（5min/day）
	1.3UN（1min/day）
	1.5UN (30ms every time，1000times during the life of the capacitor)
灌封料 Impregnation	环氧树脂 epoxy resin
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	≥100000h（1.0Un，Th≤70℃）

备注：Remarks:

1) *Ta: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.

3) * Th：产品核心温度 Product Core Temperature： $Th \approx Ta + Irms^2 \times ESR \times R_{th}$

3、产品代码说明 Part No. Description

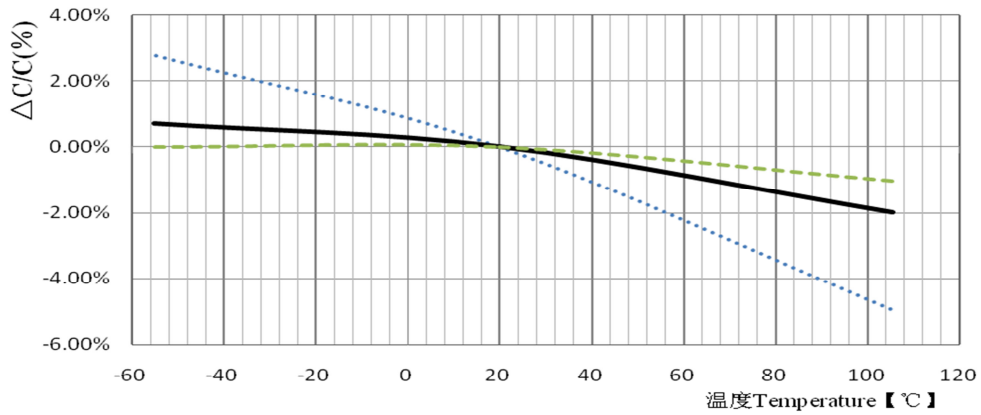
1	2-5	6	7-10	11	12	13	14	15	16	17	18	19
Series	Un	Type	Cn	Cn unit	Tolerance	Connection	Case	Terminal	Φ	H	Filling	Protection
I	1100	L	7500	U	J	N	1	B	I	U	3	N
DCL	VDC	DC-Link	750*10^0	μF	±5%	Single Phase	Al.	L1	Φ116	165	Epoxy	None

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	0.90
3000m	0.88
3500m	0.85
4000m	0.81
5000m	0.76

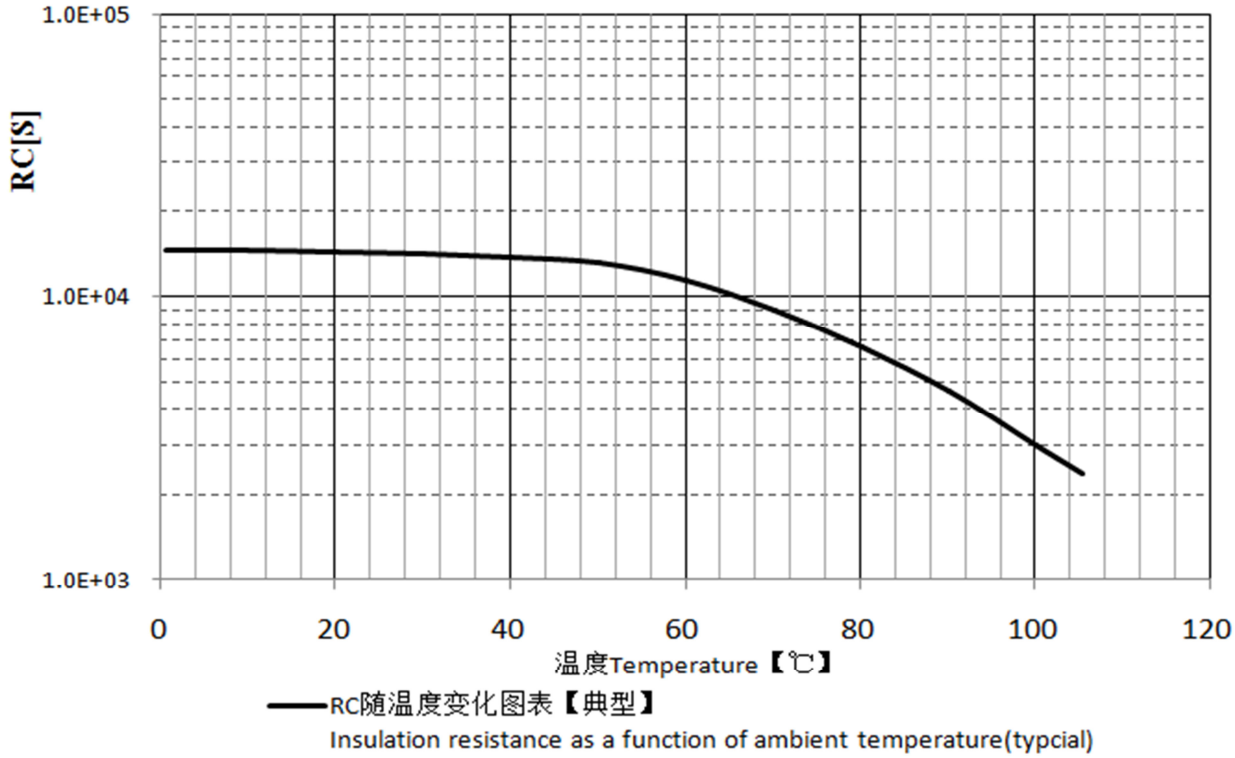
5、特征图表 Feature graph

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

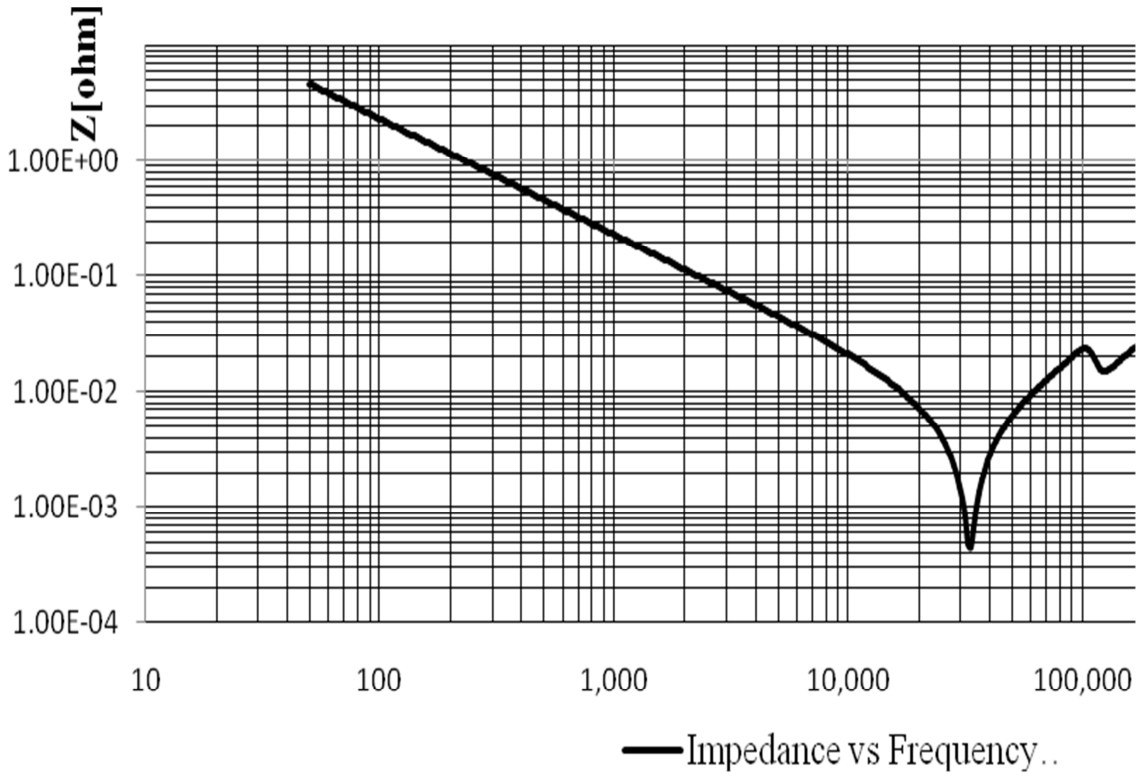


电容量变化随温度变化图表[典型]
Capacitance as a funciton of ambient temperature[typical]

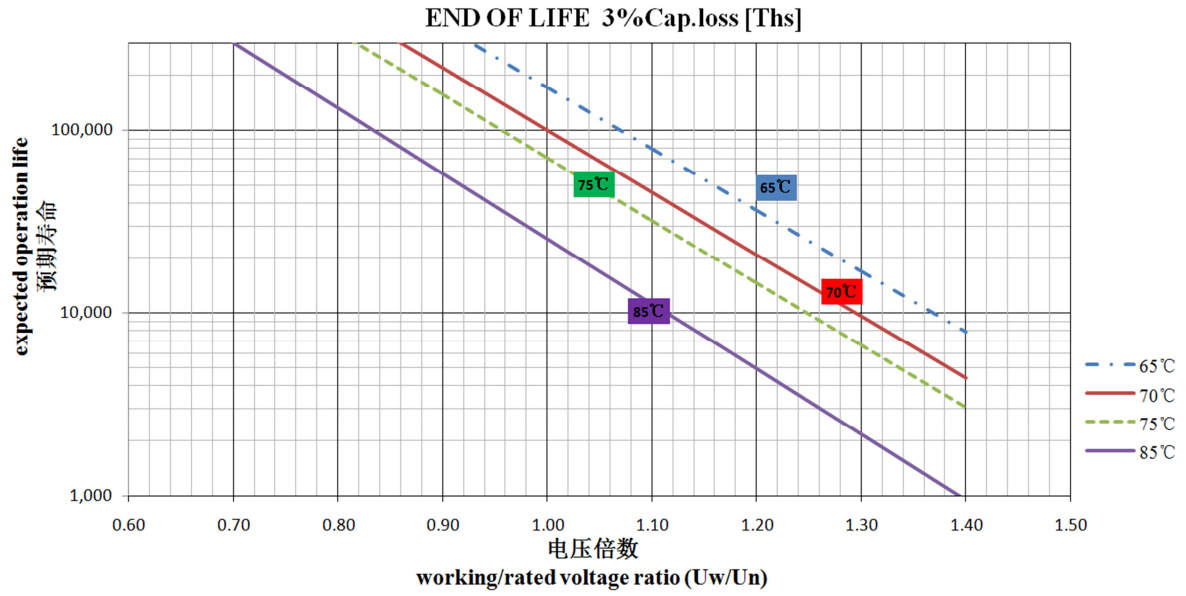
5.2 绝缘电阻随环境温度变化曲线 The graph of insulation resistance (RC) VS Ambient temperature



5.3 阻抗随频率变化曲线（典型值） The graph of Impedance VS Frequency (typical value)



5.4 预期寿命曲线 The graph of Life expectancy



6、测试项目 Test items

6.1 出厂试验 Routine tests

序号 No.	项目 Test Item	测试标准和条件 Test standard and condition	性能要求 Requirements
1	外观检查 External inspection	目视及量规测量。Visual check and Gauge measurement	符合规格书内图纸要求 Comply with the drawing require
2	极间电压试验 Voltage test between terminals	U=1.5Un（10s，25℃）	无击穿和闪络，允许有自愈性击穿。 neither puncture nor flashover shall occur. Self-healing breakdowns are permitted.
3	极壳电压试验 Voltage test between terminals to case	U=4000Vac（10s，25℃）	无击穿和闪络。 neither puncture nor flashover shall occur.
4	电容和 tanδ 测量 Capacitance and tanδmeasurements	在端子间的电压试验之后进行，测试频率100Hz。Shall be measured after voltage test between terminals, measured at 100Hz	容量 Capacitance tolerance: ±5% @100Hz 损耗tanδ≤0.0020 @100Hz

6.2 型式试验 Type Tests (IEC61071-2007 / GB17702-2013)

序号 No.	项目 Test Item	测试标准和条件 Test standard and condition	性能要求 Requirements
1	端子机械试验 Mechanical test of terminals	对电容器的每个端子施加 6N/m 力矩，持续时间 15s; Apply 6N/m torque to each terminals, duration 15s;	试验后端子机械性无损坏，电容变化不应≥0.5%。After test, terminals no mechanical damage, ΔC/C<0.5%.
2	振动 Vibration	f=10～55Hz；a=±0.35mm 每一轴向实验持续时间为10个频率周期（3个轴向互成90°），每分钟一倍频程 f=10～55Hz；a=±0.35mm Test duration per axis = 10 frequency cycles (3 axes offset from each other by 90°) , 1 octave/min	外观无可见损伤； No visible damage ΔC/C<0.5%
3	极间耐压 Voltage test T-T	U=1.5Un（60s，25℃）	无击穿和闪络，允许有自愈性击穿。 neither puncture nor flashover shall occur. Self-healing breakdowns are permitted.
4	极壳耐压 Voltage test T-C	U=4000Vac（60s，25℃）	无击穿和闪络。 Neither puncture nor flashover shall occur.
5	充击放电试验 Surge discharge test	在环境温度下，采用直流电源对电容充电，然后通过一个尽可能靠近电容的短路装置放电，在 10min 之内对电容进行 5 次这样的放电。试验电压 1.1Undc。 此项试验后 5 min 之内进行端子间电压试验（1.5Undc, 1min）。 At room temperature, charged the samples by means of a DC source and then discharged through a short-circuiting device situated as close as possible to the capacitor. They shall be subjected to 5 such discharges within 10 min. Test voltage 1.1Undc (1320Vdc). Within 5 min after this test, the samples shall be subjected to a voltage test between terminals (1.5Undc/1min).	容量变化：Δ C/C≦±1%（1KHz） 损耗角正切：$\tan\delta \le 1.2\times\tan\delta_0+1\times10\text{-}4$
6	自愈性试验 Self-healing	施加电压U=1.5Un（10s，25℃），如自愈性击穿次数＜5次，则缓慢升高电压直至发生5次自愈为止，或电压达到2.5Un；如电压达到2.5Un后，自愈性击穿次数仍小于5次，则保持2.5Un的电压10S Apply 1.5Undc for 10s @25℃. If fewer than 5 clearings have occurred during this time, the voltage shall be increased slowly until 5 clearings have occurred since the start of the test or until the voltage has reached 2.5Undc. If still fewer than 5 clearings have occurred, keep 2.5Un for 10s..	Δ C/C＜±0.5%（1KHz） $\tan\delta \le 1.1\times\tan\delta_0+1\times10^{-4}$
7	温度快速变化 Temperature change	θA=-40℃，θB=+85℃， 5次循环 持续时间：t=2h θA =-40℃, θB =+85℃, 5cycles Duration: 2 hours	外观无可见损伤 No visible damage $\Delta C/C_0 \le \pm 2\%$， $\tan\delta \le 1.2\times\tan\delta_0+1\times10^{-4}$

8	热稳定实验 Thermal stability	试验箱温度：40±3℃ 电容电流：1.1 *Irms 纹波频率：10KHz（或客户要求） 实验时最后1h，至少测量4次电容外壳温度，温升增加量应小于1℃，时间：≥8h Test temperature：40±3℃ Applied current：1.1 *Irms Frequency：10KHz Duration: ≥8h During the last 1 hour, the case temperature shall be measured at least 4 times; throughout this period of 1 hour, the temperature rise shall not increase by more than 1 K.	Δ C /C_0≤±0.5% tanδ≤1.2× tanδ_0+1×10^{-4}
9	稳态湿热 Damp heat, Steady state	温度：40℃±2℃ 湿度：93%RH 持续时间：21天 Temperature: 40℃±2℃ Humidity:93%RH Duration: 21 days	外观无可见损伤，No visible damage， Δ C/C≤±5% tanδ≤1.2×tanδ_0+1×10^{-4} RC≥ RC_0 * 50%
10	耐久性测试 Endurance	1) 1.3×U_{NDC}，+70℃，500 hours 2) 1.4×I_{peak}，1000 times discharge, room temperature 3) 1.3×U_{NDC}，+70℃，500 hours	Δ C/C≦±3%
11	局部放电 Partial discharge Test	由用户和制造商协商确认（可选项） On agreement between the user and the manufacturer （optional type test）	由用户和制造商协商确认 On agreement between the user and the manufacturer

7、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.

8、注意事项 Matters needing attention

8.1 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.

8.2 定期检查电容端子的松紧程度。

Check the tightness of the capacitor connection regularly.

8.3 产品要求室内任意方向固定安装；安装环境污秽等级III级；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。

The product can be installed in any direction indoor; 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.

8.4 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.

8.5 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.

9、产品图纸 Product outline drawing