



规格承认书

SPECIFICATION FOR 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	DCLJ2SY 2200-1460
胜业产品编码 Sheng Ye Part No.	I2200L1461UKM6RYU3N

厂商认可

客户名称 Customer	Platan LLC
客户确认 APPROVED	

胜业电气股份有限公司 ShengYe Electric Co.,Ltd			
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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

Nominal Values	
Rated capacitance (Cn)	1460μF (25°C,100Hz)
Capacitance Tolerance	±10% (K)
Rated voltage (Undc)	2200VDC
Ripple voltage-peak to peak (Ur)	200V
Max. Current (Imax)	200A @ Tambient*=60°C;
Max. peak current (Ipeak)	2kA
Max. surge current(Is)	2.3kA
Equivalent series resistance (ESR*)	≤ 0.2 mΩ
Equivalent series inductance (ESL)	≤ 50nH
Loss angle of the capacitor (tanδ)	≤0.0008 (1V, 20°C , 50Hz)
Dielectric loss factor (tanδ0)	≤0.0002
Self discharge time (RC)	≥10000 s
Over voltage	
1.1 Undc	2420Vdc, 30% of on_load_duration
1.15 Undc	2530Vdc, 30min/day
1.2 Undc	2640Vdc, 5min/day
1.3 Undc	2860Vdc, 1min/day
1.5 Undc	3300Vdc, 30ms every time , 1000times during the life of the capacitor
Voltage Test	
Between terminals (Ut-t)	3300Vdc/10s
Terminal to case (Ut-c)	4800Vac (50Hz, 60s)
Climatic conditions	
Cooling	Natural ventilation



Ambient operation temperature	-50 / +60 °C
Storage temperature	-50 / +85 °C
Max. hotspot temperature (Ths)	+85 °C
Humidity	≤ 98% @ +25°C
Altitude	≤ 1400m
Short-term condensation on the housing is acceptable (should consider electrical insulation between live parts)	
Expected service life	
Expected life time	≥100,000 hours @Undc, Ths* ≤70°C
Failure rate	≤300 FIT
Mechanical value	
Weight	≈30kg
Case material	Stainless steel
Connection Terminals	
Type	Tinned Cooper bar
Creepage distance	58mm
Air distance	47mm
Technology	
Dielectric	Metaillized polypropylene, self-healing
Filling material	Epoxy resin
Reference standard	IEC61881-1-2010

备注 : Remarks:

1) *Tambient: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) * Ths : 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	Un	Type	Cn	Cn unit	Tolerance	Connectio n	Cas e	Terminal	Φ	H	Filling	Protection
I	2200	L	1461	U	K	M	6	R	Y	U	3	N
DCL	VDC	DC-Lin k	146*10 ¹	μ F	± 10 %	Custo mized	SS	J2	other	other	resin	None

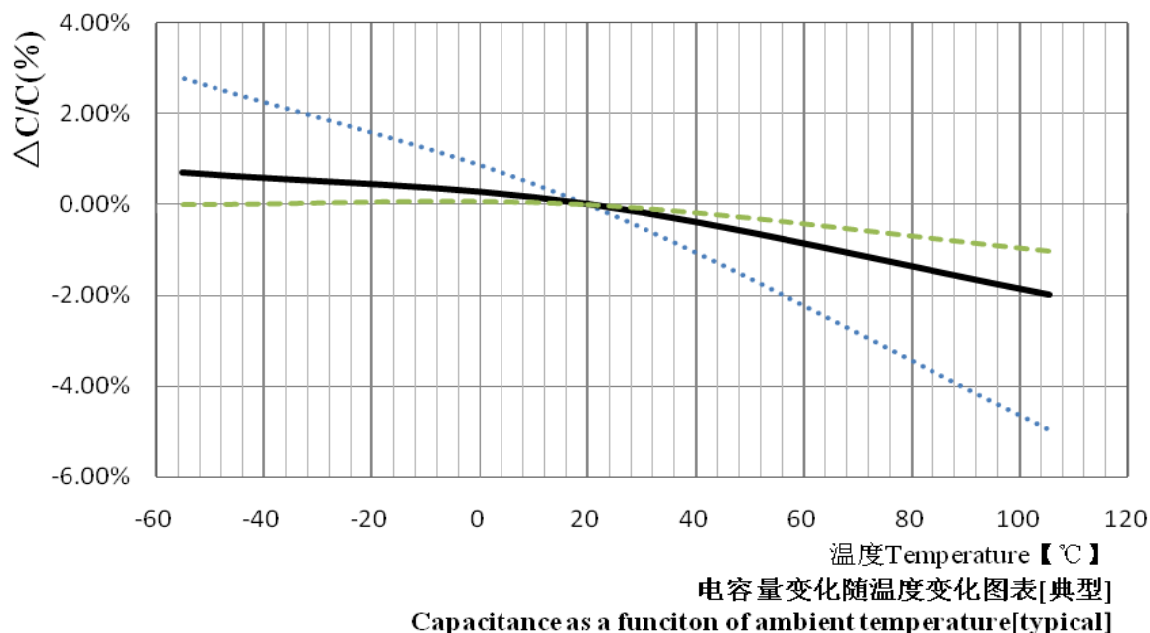
4、电容器使用海拔高度与电流降额系数的关系 The current de-rating against altitude

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

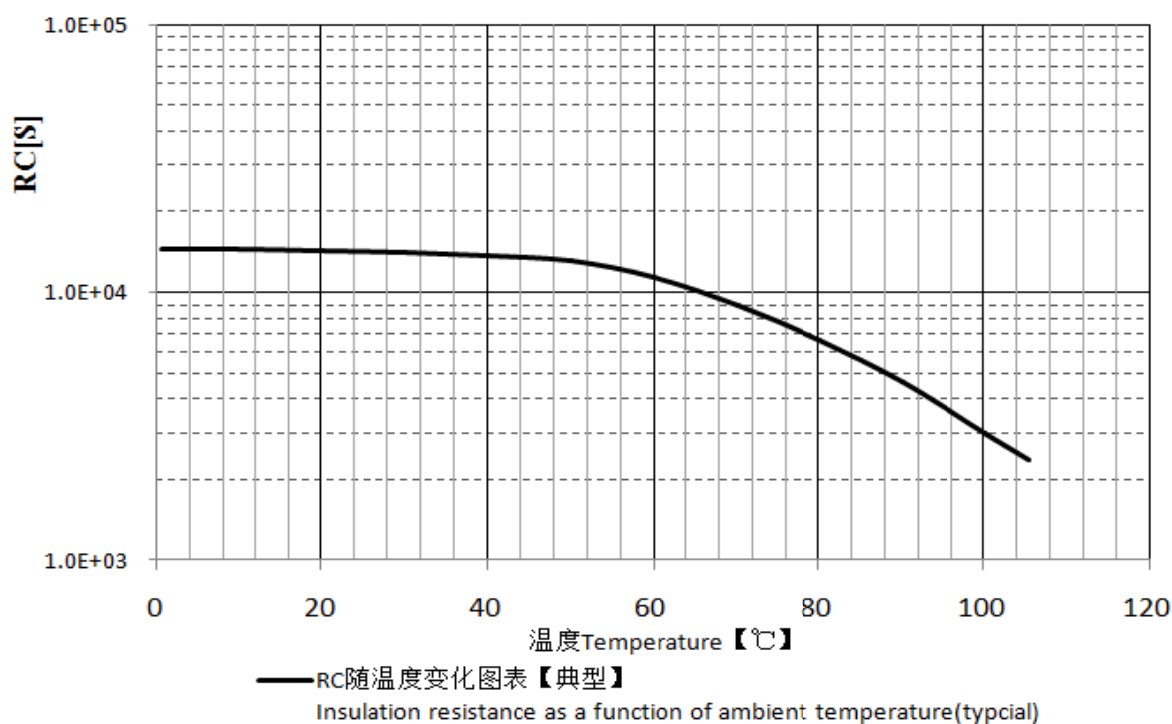


5、特征图表(典型值) Feature graph (Typical value)

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

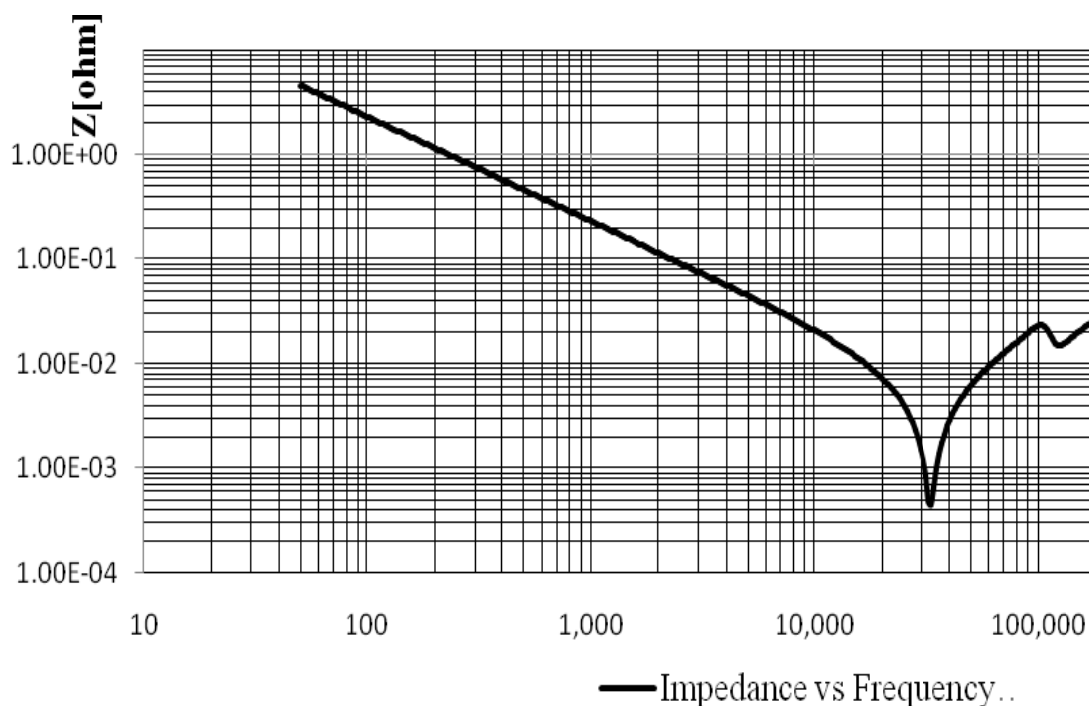


5.2 绝缘电阻随环境温度变化曲线 The graph of insulation resistance (RC) VS Ambient temperature

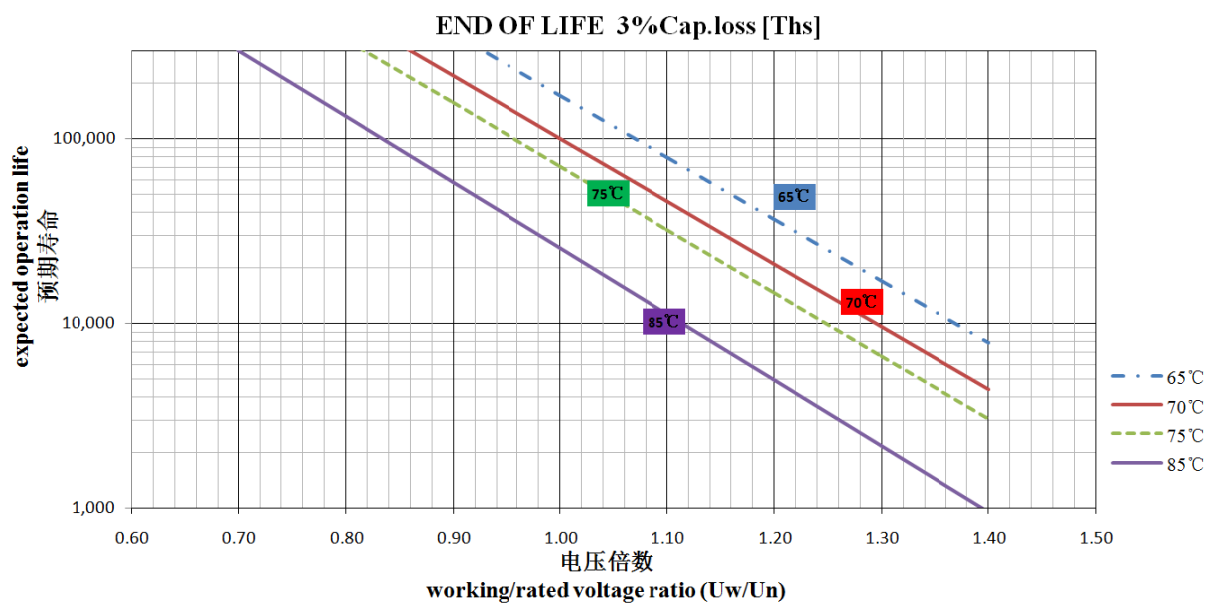




5.3 阻抗随频率变化曲线 The graph of Impedance VS Frequency



5.4 预期寿命曲线 The graph of Life expectancy





6、注意事项 Matters needing attention

6.1 安全预防 Safety precautions

注意：电击、燃烧和爆炸的危险

- 只有专业人员才能安装这个设备，并且要完整通读使用手册之后；
- 不要单独工作；
- 对此设备做检查、测试和维护之前，先要断开所有电源连接；
- 对电源系统的设计要特别注意，考虑所有的电源，包括反送电的可能性；
- 要使用正确调整电压的检测设备来确定所有的电源都已断开；
- 当心潜在的危险，做好个人防护装具，仔细检查设备内的工作区域看是否有工具和其他遗留物体；
- 当移除或安装时注意不要碰到带电母线，以免造成个人伤害；
- 这个设备的成功运行依赖于正确的处理，安装的操作。忽略基本的安装要求可能造成个人的伤害，也可能损坏电气设备或者其他物体；
- 对设备作介电强度和绝缘测试时，因断开所有与其连接的输入或输出线。高压试验可能损坏该设备；
- 设备运行中应保持其表面清洁，各接线端子紧固良好。

CAUTION: HAZARD OF ELECTRIC SHOCK, FIRE AND EXPLOSION

- Only professionals should install this equipment, and should after reading the user manual completely;
- Do not work alone;
- Disconnect all power connections before inspecting, testing and performing maintenance on this equipment;
- Pay special attention to the design of the power system and consider all power sources, including the possibility of reverse power supply;
- Use properly adjusted voltage testing equipment to make sure all power supplies are disconnected;
- Be aware of potential hazards, wear personal protective equipment, and carefully check the work area within the equipment to see if there are tools and other objects left behind;
- Be careful not to touch live busbars when removing or installing to avoid personal injury;
- Successful operation of this equipment depends on correct handling and installation operation. Ignoring basic installation requirements may cause personal injury or



damage to electrical equipment or other objects;

- When conducting dielectric strength and insulation tests on the equipment, disconnect all input or output wires connected to it. High voltage testing may damage the device;
- During the operation of the equipment, its surface should be kept clean and all terminals should be tightened well.

6.2 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.

6.3 验收检验 Acceptance inspection

-外观验收：用户收到电容器后，应首先检查电容器标志中的型号、规格及各项参数是否与所购产品相符，同时检查电容器外观质量及出厂检验报告，合格证等是否齐全；

-性能验收：用户可按标准对电容器端子间、端子与外壳间、 $\tan\delta$ 、电容量等电性能进行检查测试，如有特殊要求，应按事先商订的条件进行试验测试。

-重点关注：若电容器表面有超过 1mm 深的凹坑、绝缘套管出现破碎等其他机械性损伤，请不要使用该电容器。

-Appearance acceptance: After receiving the capacitor, the user should first check whether the model, specifications and parameters in the capacitor label are consistent with the purchased product, and also check whether the appearance quality of the capacitor and the routine test report, QC pass certificate, etc. are complete;

-Electrical performance acceptance: Users can make voltage test between capacitor terminals, between terminals and case; measure loss $\tan\delta$, capacitance and other electrical parameters according to the specification. If there are special test requirements, the test should be carried out according to the conditions agreed in advance.

- Important attention: If there are pits more than 1mm deep on the surface of the capacitor, or other mechanical damage such as broken insulation sleeves of connection terminals, please do not use the capacitor.



6.4 安装运行 Installation and operation

- 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.

- 电容器在安装时应保证有良好的通风环境。安装时电容器之间应留有不小于 30mm 的距离，Capacitors should be installed in a well-ventilated environment. There should be a distance of not less than 30mm between capacitors.

- 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.

- 电容器固定螺栓安装扭力矩建议值：螺栓 M8 扭力 12N.m；螺栓 M10 扭力 15N.m；螺栓 M12 扭力 20N.m；螺栓 M16 安装扭力 25N.m；

Recommended torque values for capacitor fixing bolts: M8 bolts, 12N.m; M10 bolts, 15N.m; M12 bolts, 20N.m; M16 bolts, 25N.m;

- 电容器接线端子安装扭力矩建议值：螺栓 M8 扭力 12N.m，螺栓 M10 扭力 15N.m，螺栓 M12 扭力 20N.m，螺栓 M16 安装扭力 25N.m。

Recommended torque values for capacitor connection terminals: M8 bolts, 12N.m; M10 bolts, 15N.m; M12 bolts, 20N.m; M16 bolts, 25N.m.

6.5 维护检修 Maintenance

- 应定期检查电容器端子的松紧程度以及接线端绝缘套管的清洁程度，建议每半年检查一次，确保产品接线牢固以及接线端绝缘子污秽等级满足要求。

- 应定期检查电容器容量值，建议每 5 年检查一次，将容值下降超 3%产品更换。

- 维护和检修时，务必遵循 6.1 “安全预防” 要求

- The tightness of the capacitor terminals and the cleanliness of the terminal insulating sleeves should be checked regularly. It is recommended to check once every six months to ensure that the product wiring is firm and the contamination level of the terminal insulator meets the requirements.

- Capacitor capacitance should be checked regularly. It is recommended to check once every 5 years and replace products whose capacitance drops by more than 3%.

- During maintenance and inspection, be sure to follow the requirements of 6.1



"Safety Precautions"

6. 6 可能发生的故障及排除方法 Possible faults and troubleshooting methods

序号 No.	可能发生的故障 Possible faults	排除方法 troubleshooting methods
1	产品出现鼓包 Bulges appear	更换电容器 Replace capacitor
2	容值下降过快 Capacitance drops too fast	更换电容器 Replace capacitor

6. 7 重要申明 Important statement

本规格书中部分说明包含了对该电容在相关应用中的适用性信息。此类说明仅基于我司对该电容在典型电力电子应用中的相关知识及经验，并不能等同于其在特定应用中的适用性，也不应作为相关可靠性的保证。相较我司，客户应更了解其自身应用对电容性能的需求。因此，客户应检查并最终决定该产品是否符合其特定应用的需求。

另外，我们需指出，在个别情况下，即使按规定操作，也不能完全排除电子元件在其正常使用寿命结束之前出现故障的可能性。因此，在需要非常高水平的操作安全性的应用中，特别是在电子元件的故障或失效可能危及人类生命或健康的应用中，必须通过以下方式来确保安全性：客户应用的适当设计或客户采取的其他措施（例如安装保护电路或提高设计裕量），确保在电子组件发生失效或故障时不会对第三方造成伤害或损害。

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。

Some descriptions in this data sheet contain information regarding the suitability of this capacitor for related applications. Such descriptions are only based on our company's relevant knowledge and experience of this capacitor in typical power electronics applications, and do not equate to its applicability in specific applications, nor should they be used as a guarantee of reliability. Compared with our company, users should have a better understanding of the capacitor performance requirements for their own applications. Therefore, users should examine and ultimately decide whether this product meets the needs of their specific application.

In addition, we would like to point out that in individual cases, the possibility of failure of electronic components before the end of their normal service life cannot be completely ruled out, even if they are operated according to specification. Therefore, in applications that require a very high level of operational safety, and in particular in applications where the malfunction or failure of electronic components could endanger human life or health, safety must be ensured by appropriate design of the customer's application or by the customer additional measures taken, such as installing protective circuits or increasing design margins, to ensure that no harm or



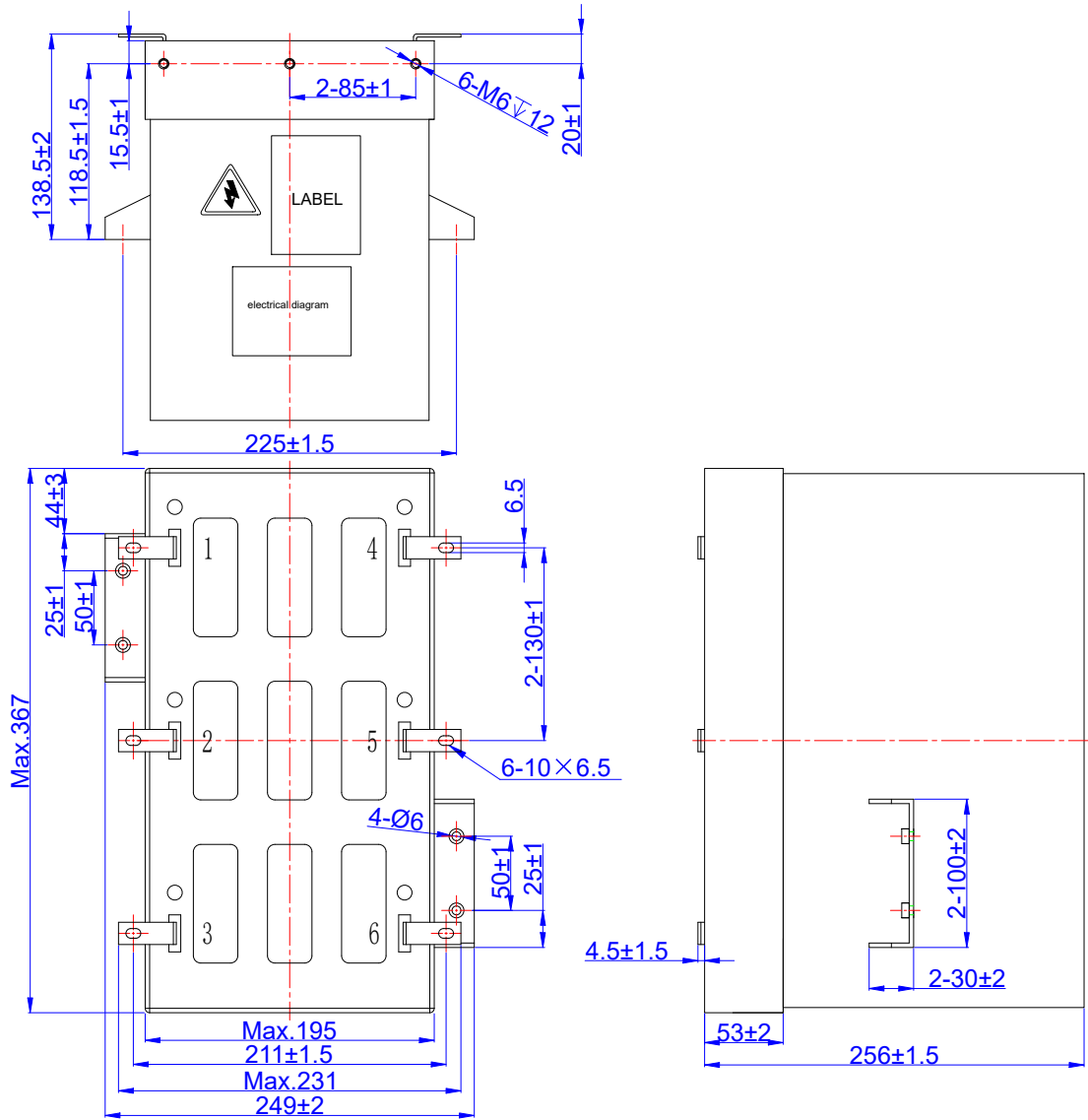
DCLJ2 series

damage is caused to third parties in the event of electronic component failure or malfunction.

If you have any questions or need more detailed information, please feel free to contact our technical service department.

7、产品图纸 Product outline drawing

I2200L1461UKM6RYU3N



Material regist

CAD

Check

Former diagram NO.

Diagram NO.

Signature

Date

electrical diagram

1:2:3 4:5:6



WARNING PLATE



creepage distance: 58mm
air distance: 47mm

LABEL

POWER & ELECTRONIC
CAPACITOR
® DCLJ2SY 2200-1460
I2200L1461UKM6RYU3N
Cn = 1460 uF
Un = 2200 VDC
Cat.Temp.-40/65 Ins.Class 5.8-kv
SH Dry. Non PCB
Discharge before handling
Ref.std. IEC 61071
Shengye Electric Co., Ltd
0000000000

Order.NO

DCLJ2SY 2200-1460
I2200L1461UKM6RYU3N

Platan

SHENG YE

Design Phases Weight Scale

Total Page2 Page2

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