NO:TH-23872

承认申请书

APPLICATION FOR APPROVAL

产品符合欧盟 RoHS 环保要求

CUSTOMER: 深圳市立创电子商务有限公司

PART NAME: 瓷介电容器

DRAUGHT BY: 宋桂涛

CHECKED BY: 秦建国

APPROVERED BY: 刘祥峰

DATE: Oct.13,2023

APPROVAL FIELD

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YINAN DON'S ELECTRONIC COMPONENT CO., LTD.

变　更　清　单
REVISION LIST

序号 NO.	日　期 DATE	变更内容 CHANGE CONTENT	变更标记 REMARK
1	2023-10-13	首次提供 First provides	-----
2			
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瓷介电容器

Ceramic Capacitors

□用途

该产品主要用于彩电、计算机显示器、复印机、电子仪器等的高频谐振回路中作温度补偿等.

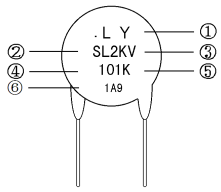
□Application

Using for high frequency resonance circuit of colour TV and monitor、copy machine、electronic equipment.

□外观及结构(Appearance and Structure)

编码 CODE	品　　名 CODE　NO.	Dmax(mm)	Tmax(mm)	F(mm)	d(mm)
	CC81-1KV-06a-SL-56K-1T1	6.5	4.0	5.0	0.55
	CC81-2KV-06A-SL-10K-1T1	6.5	4.0	5.0	0.55
	CC81-2KV-06A-SL-22K-1T1	6.5	4.0	5.0	0.55
	CC81-2KV-06A-SL-47K-1T1	6.5	4.0	5.0	0.55
	CC81-2KV-08A-SL-101K-1T1	8.5	4.0	5.0	0.55

□标识方法(Marking)

示例(Example)	项 目(Item)	
	①.LY	公司代号 Manufacturer's Code
	②SL	温度特性 Temperature Characteristic
	③2KV	额定电压 Rated Voltage
	④101	标称容量 Rated Capacitance
	⑤K	容量偏差 Tolerance of Capacitance
	⑥1A9	生产日期 Production Date

说明: 生产日期第一位表示制作年度，标示方法参照年度对照表；第二位表示制作月份，第三位表示具体制作日期，标示方法参照 34 进制对比表；例如: 生产日期 1A9 表示: 1:21 年 A:10 月，9:9 日

(Production date first said the annual, marking methods according to annual comparison table; second said production month, third said the specific production date marking method of comparison, table 34 hexadecimal; Example: Production date 1A9 show: 1:2021year A: October 9: the 9 day):

年度对比表:

年 度	2013	2014	2015	2016	2017	2018	2019
年代码	3	4	5	6	7	8	9
年 度	2020	2021	2022	2023	2024	以此类推	
年代码	0	1	2	3	4		

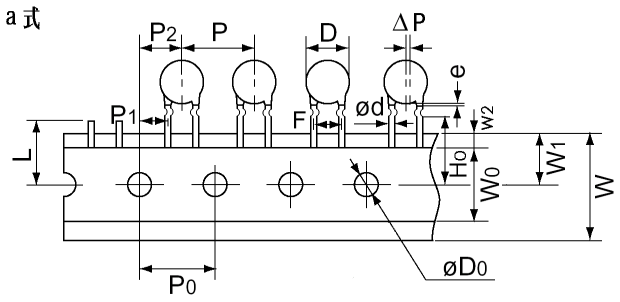
34 进制对比表:

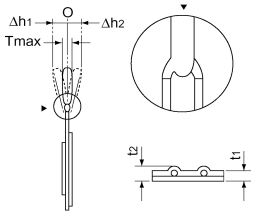
34 进制	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	H
10 进制	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
34 进制	J	K	L	M	N	P	Q	R	S	T	V	W	X	Y	Z		
10 进制	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		

编带(Taping Package):

●a 式　引线间距 F=5.0mm

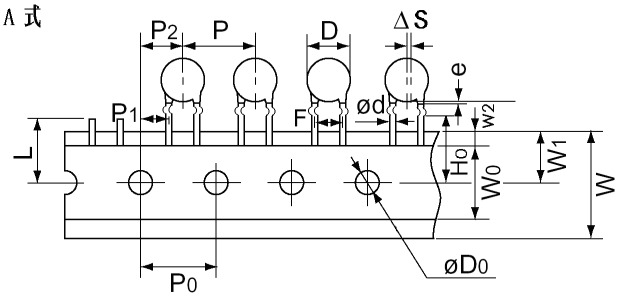
Type a（lead spacing F=5.0mm）





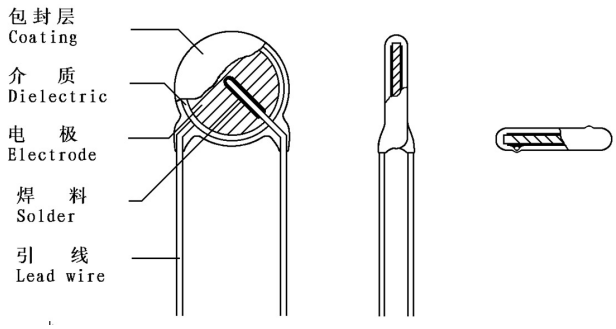
●A 式　引线间距 F=5.0mm

Type A（lead spacing F=5.0mm）



代码 Code	a/A 式　Type a/A(mm)
F	5.0±0.6
P	12.7±0.5
P0	12.7±0.3
P1	3.85±0.7
P2	6.35±1.3
Δh	2.0max
W	18.0±0.5
W0	6.0min
W1	9.0±0.5
W2	1.5±1.5
H0	16.0-0.5/+1.0
D0	4.0±0.2
Φd	0.55±0.055
L	11.0 max
e	不过弯中央No over the center of crimp
t1	0.5±0.3
t2	1.5max
ΔP/ΔS	0±2.0

□结构(Structure)



包封层(Coating) ： 环氧树脂(Epoxy Resin)

介 质(Dielectric)： 陶 瓷 (Ceramic)

电 极(Electrode ： 银 (Silver)

焊 料(Solder) ： 锡(Alloy Tin)

引 线(Lead Wire) ： 镀锡引出线(Lead)

□主要材料(Main Material)

$SrCO_3$ $BaCO_3$ TiO_2 Bi_2O_3 $CaCO_3$ Nb_2O_5 MgO

银膏(Silver paste) 环氧树脂(Epoxy Resin)

□测试条件(Test Condition)

温度(Temp.)： 常规测试 (Routine test): 15~35℃,

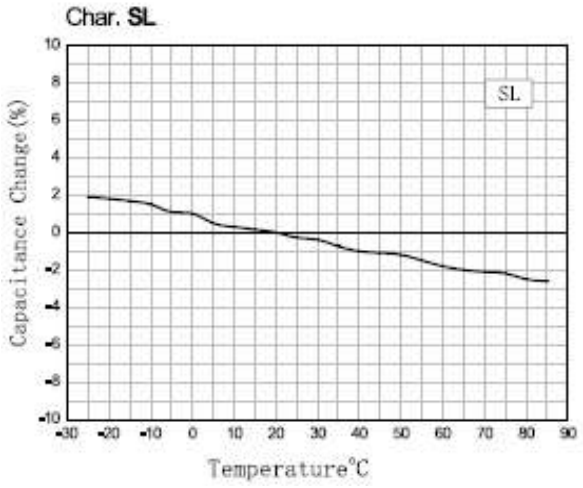
有疑义时测试 (Test in case of disagreement): 20±2℃

相对湿度(R.H.): 45~75%

电压(Vol.): 1.0±0.2Vrms 频率(Freq.): 1±0.2MHz

□容量—温度变化曲线 Cap.—Temp. Curve

SL



□型号命名方法 Part Code Designation

CC81——2KV——08 A——SL——101 K——1 T1

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①种类 Class

代码 Code	种类 Class
CC81	Ⅰ类高压 Class Ⅰ High-Voltage

②额定电压 Rated Voltage

代码 Code	额定电压 Rated Vol.	代码 Code	额定电压 Rated Vol.
1KV	1000V.DC		
2KV	2000V.DC		

③主体外径 Body Diameter

代码 Code	最大外径 Max Diameter of Body	代码 Code	最大外径 Max Diameter of Body
06	6.5mm		
08	8.5mm		

④引线形式 Lead Shape

代码 Code	形式 Shape
a	单内弯 Single inside Crimp
A	单外弯 Single outside Crimp

⑤温度特性 Temperature Characteristic

代码 Code	容量变化 Cap. Change
SL	+350~-1000ppm/℃

⑥标称容量 Rated Capacitance

代码 Code	静电容量 Capacitance	代码 Code	静电容量 Capacitance
10	10pF	101	100pF
22	22pF		
47	47pF		
56	56pF		

⑦容量允差 Tolerance

代码 Code	容量允差 Tolerance
K	±10%

⑧引线间距 Lead spacing

代码 Code	间距 spacing
1	5.0mm
2	7.5mm
3	10.0mm

⑨包装方式 package Shape

代 码 Code	形式 Shape
T1	P0=12.7mm P=12.7mm

□编带包装 (Taping Package packing)

1、 包装数量 (packing quantity):

引线间距 Lead spacing	包装盒分类 Kinds of plastic box	成型方式 Molding mode	包装数量 Quantity per bag	备注 Remark
F=5.0mm	1# 2#	a/A	2000	包装盒尺寸: Size of plastic box 1#: 336×240×45mm 2#: 336×290×48mm

2、 包装标识 (packing marking):

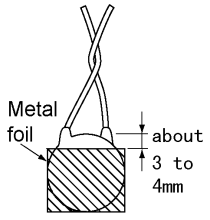
示例(Example)	项 目(Item)	
	鲁 LY 颖	公司商标 (Manufacturer's Marking)
	RoHS	环保标识 RoHS Designation
	物料编码 Code	用户要求时 When the customer require
	规格型号 Model	详见如上表格, (Please see the detail in the upper sheet)
	生产批号 Product lots	生产批号 Product lots
	成型代号 lead shape	用户要求时 When the customer require
	生产日期 Productive date	产品生产时间 the produce time of the product
	数 量 Quantity	每盒的包装数量 the packing quantity per plastic bag

3、 外包装 (over-wrap packing):

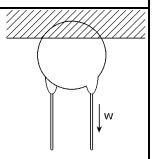
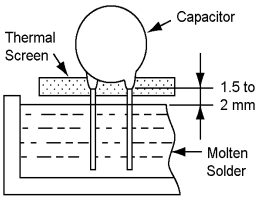
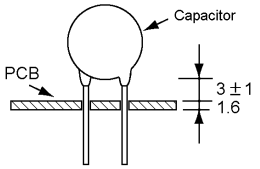
外包装箱 (over-wrap boxes) (B1:520×370×280mm、B2:358×312×275mm)

装箱数量应为最小包装的整数倍。(The packing quantity should be integral multiple of minimal packaging.)

□规格及试验方法 Specification and Test Method

项 目 ITEM		规 格 SPECIFICATION	试 验 方 法 及 条 件 TEST METHOD AND CONDITION
1.使用温度范围 Operating Temp. Range		-40℃~+ 125℃	
2.外观尺寸 Appearance and Dimension		外观无可见损伤 尺寸在规格内 Appearance has no marked defect. Dimensions shall be within specified tolerance.	外观用目视法观测 尺寸用游标卡尺测量 Appearance be watched on sight Dimension be measured by caliper
3.标识 Mark		应清晰可见 Should be discerned easily.	用目视法观测 Be watched on sight
4.静电容量 Capacitance		在规格范围内 Within specified tolerance	温度 Temp. 20±2℃ 电压 Vol. 1.0±0.2Vrms 频率 Freq. 1±0.1MHz
5.损耗因数 Dissipation Factor		0.15% max	同上 Same condition as capacitance
6.绝缘电阻 Insulation Resistance		大于 10,000MΩ 10,000MΩmin	500±50V.DC 的电压充电一分钟。 The insulation Resistance shall be measured with 500±50V.DC within 60±5 sec of charging.
7.耐电压 Dielectric Strength	端子间 Between Lead Wires	无不良 No failure.	端子间施加 200%的额定电压一分钟。（充放电电流<50mA） Apply a DC voltage of 200% of the rated voltage for 1 min. (Charge/discharge current<50mA)
	端子与外壳间 Body Insulation	无不良 No failure.	如图，将电容器的引线连在一起，主体外紧包一层金属箔，边沿距引线 3-4mm，在电容器引线和金属箔间施加 200%的额定电压一分钟。（充放电电流<50mA） The terminals of the capacitor shall be connected together, A metal foil shall be closely wrapped around the body of the capacitor to the distance of about 3-4 mm from each terminal, A voltage of 200% of the rated is applied between the capacitor lead wires and the metal balls for 1 min. (Charge/discharge current<50mA) 
8.温度特性 Temp. Char.	Ct－C3 / C3	+350~-1000ppm/℃	静电容量测试须依下列顺序测试。 试验前：电容器应放置在 85±2℃的温度下 1 小时，然后在常温下恢复 24±2 小时后测试。 The capacitance measurement shall be made at each step specified as following. Capacitance change from the volume of step 1 shall not exceed the limit specified. pre-treatment: The capacitor shall be placed at 85±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement.

步骤(Step)	①	②	③
温度(Temp.)	20±2℃	85±2℃	20±2℃

<table>
<tr><th>项 目
ITEM</th><th colspan="2">规 格
SPECIFICATION</th><th>试 验 方 法 及 条 件
TEST METHOD AND CONDITION</th></tr>
<tr><td rowspan="2">9. 端子强度
Strength of Lead Wires
(c 式不做此项 Type c none)</td><td>抗拉强度
Pull</td><td rowspan="2">导线不断裂
电容器不破损
Lead wire shall not cut off and capacitor shall not be damaged</td><td>把制品固定,在端子引出方向施加负荷 10N 保持 10±1 秒。
Fix the body of the capacitor and apply a tensile weight gradually to each lead wire in the radial direction of capacitor up to 10N,and keep it for 10 ±1sec.
  </td></tr>
<tr><td>弯曲强度
Bending</td><td>在端子间施加 5N 负荷并弯曲 90°，回复原后反向弯曲 90°，
每次弯曲时间为 2 至 3 秒，连续 2 次。
Each lead wire shall be subjected to 5N weight and then a 90° bend, at the point of egress, in one direction return to original position, and then a 90° bend in the opposite direction at the rate of one bend in 2-3 s for 2times.</td></tr>
<tr><td rowspan="2">10. 耐焊接热
Soldering Effect</td><td>外观
Appearance</td><td>无显著异常
No marked defect</td><td rowspan="2">将端子浸入温度为 260±5 ℃的熔锡内,外保留 1.5-2.0mm 距离主体边缘,并保持 5.0±0.5 秒。
试验前：电容器应放置在 125±2℃的温度下 1 小时，
然后在常温下恢复 24±2 小时后测试。
试验后：室内条件下恢复 24±2 小时。
The lead wires shall be immersed into the melted solder of 260 ±5℃ up to about 1.5 to 2.0 mm from the main body for 5.0±0.5 sec.
Pre-treatment: The capacitor shall be placed at. 125±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement.
Post-treatment: Capacitor shall be stored for 24±2 hours at room condition.
  </td></tr>
<tr><td>容量变化
Capacitance Change</td><td>SL:±2.5% max
or 1pF, 取较大者
Whichever is large.</td></tr>
<tr><td rowspan="2">11. 温度循环
Temp. Cycling</td><td>外观
Appearance</td><td>无显著异常
No marked defect</td><td rowspan="2">将电容器放入高低温箱，按下列步骤循环 5 次。
试验前： 电容器应放置在 125±2℃的温度下 1 小时，
然后在常温下恢复 24±2 小时后测试。
试验后： 在室内条件下恢复 24±2 小时测试。
The capacitor shall be introduced into the test chamber, and shall be exposed to the temperature conditions as shown in table at 5 cycles.
pre-treatment: The capacitor shall be placed at 125±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement.
Post-treatment: Capacitor shall be stored for 24±2 hours at room conditions.
<table><tr><td>步骤(STEP)</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>温度(TEMP.)</td><td>-40±3℃</td><td>20±2℃</td><td>125±3℃</td><td>20±2℃</td></tr><tr><td>时间(TIME)</td><td>30±3min.</td><td>3min. max</td><td>30±3min.</td><td>3min. max</td></tr></table></td></tr>
<tr><td>容量变化
Capacitance Change</td><td>SL:±5.0% max
Or 1pF, 取较大者
Whichever is large.</td></tr>
<tr><td rowspan="2">12. 耐振性
Vibration Resistance</td><td>外观
Appearance</td><td>无显著异常
No marked defect</td><td rowspan="2">电容器须焊锡固定好，固定点距电容器主体 3±1.0mm，并施加一加速度为 390m/s2,脉冲时间为 6ms 的碰撞，次数为 4000 次。
试验前：电容器应放置在 125±2℃的温度下 1 小时，
然后在常温下恢复 24±2 小时后测试。
试验后：在室内条件下恢复 24±2 小时测试。
The capacitor shall firmly be soldered to the supporting lead wire about3±1.0 mm from the body of the capacitor and a collision which is 390m/s^2 in the acceleration, 6ms in the pulse cycle for 4000 times.
pre-treatment: The capacitor shall be placed at 125±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement.
Post-treatment: Capacitor shall be stored for 24±2 hours at room conditions.
  </td></tr>
<tr><td>容量变化
Capacitance Change</td><td>SL:±2.5% max
or 1pF,
取较大者
Whichever is large.</td></tr>
<tr><td>13. 易焊性
Solder ability of lead wires</td><td colspan="2">导线上沾锡面积大于 90%。
Lead wire shall be soldered with uniformly coated on the axial direction over 90% of the circumferential direction.</td><td>导线须浸入助焊剂后再浸入 245±5℃的熔锡内，松香浓度 25%wt,距离主体 2.0~2.5mm,
时间 2±0.5 秒。
The lead wires of the capacitor shall be dipped into a alcohol solution of 25% wt rosin and then into molten solder of 245 ±5℃ for 2±0.5 sec. In both case the depth of dipping is up to about 2.0 to 2.5 mm from the root of the lead wires.</td></tr>
</table>

项 目 ITEM	规 格 SPECIFICATION		试 验 方 法 及 条 件 TEST METHOD AND CONDITION
14.碰撞试验 Collision Resistance	外观 Appearance	无显著异常 No marked defect	电容器须焊锡固定好，固定点距电容器主体 3±1.0mm，并施加一加速度为 390m/s2,脉冲时间为 6ms 的碰撞，次数为 4000 次。 试验前：电容器应放置在 125±2℃的温度下 1 小时， 然后在常温下恢复 24±2 小时后测试。 试验后：在室内条件下恢复 24±2 小时测试。 The capacitor shall firmly be soldered to the supporting lead wire about3±1.0 mm from the body of the capacitor and a collision which is 390m/s^2 in the acceleration,6ms in the pulse cycle for 4000 times. pre-treatment: The capacitor shall be placed at 125±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement. Post-treatment: Capacitor shall be stored for24±2 hours at room conditions.
	容量变化 Capacitance Change	SL:±2.5% max or 1pF,取较大者 Whichever is large.	
15.湿热循环 Humidity Cycling	外观 Appearance	无显著异常 No marked defect	电容器在温度 40±2℃，湿度 95±3%RH 下放置 8 小时，室温下放置 16 小时，循环 5 次。 试验后:在室内条件下恢复 1 至 2 小时。 Set the capacitor for 8 hours at 40±2℃ in 95±3% RH, then placed at room condition for 16 hours, circulating for 5 times. Post-treatment: The capacitor shall be stored for 1 to 2 hours at room condition.
	容量变化 Capacitance Change	SL:±3% max or 1pF, 取较大者 Whichever is large	
	损耗因数 D.F.	0.30% max	
	绝缘电阻 I.R.	大于 2500MΩ 2500MΩmin	
16.耐湿性 Humidity	外观 Appearance	无显著异常 No marked defect	电容器在温度 40±2℃，湿度 95±3%RH 下放置 500±12 小时。施加额定电压时，样本一半施加额定电压 (UR)，样本另一半不施加电压。 试验前：电容器应放置在 125±2℃的温度下 1 小时， 然后在常温下恢复 24±2 小时后测试。 试验后：在室内条件下恢复 24±2 小时。 Set the capacitor for 500±12 hours at 40±2℃ in 95±3% RH. When applying rated voltage, half of the sample is subjected to rated voltage (UR), while the other half is not subjected to voltage. pre-treatment: The capacitor shall be placed at 125±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement. Post-treatment: The capacitor shall be stored for 24±2 hours at room condition.
	容量变化 Capacitance Change	SL:±3% max or 1pF, 取较大者 Whichever is large	
	损耗因数 D.F.	0.30% max	
	绝缘电阻 I.R.	大于 2500MΩ 2500MΩmin	
17.寿命试验 Life Test	外观 Appearance	无显著异常 No marked defect	施加 150%的额定电压并在 125±2℃下放置 1000 小时。(充放电电流限于 50mA 以下) 试验前：电容器应放置在 125±2℃的温度下 1 小时， 然后在常温下恢复 24±2 小 时后测试。 试验后：在室内条件下恢复 24±2 小时。 Apply a DC voltage of 150% of the rated voltage for 1000 hours at 125±2℃ . (Charge/discharge current≤ 50mA). pre-treatment: The capacitor shall be placed at 125±2℃ for 1 hour, then placed at room condition for 24±2 hours before initial measurement. Post-treatment: Capacitor shall be stored for 24± 2 hours at room condition.
	容量变化 Capacitance Chance	SL:±5% max or 1pF, 取较大者 Whichever is large	
	损耗因数 D.F.	0.30% max	
	绝缘电阻 I.R.	大于 4000MΩ 4000MΩmin	

□瓷介电容器使用注意事项 Ceramic capacitor use matters needing attention :

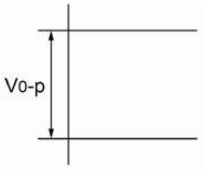
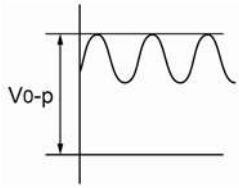
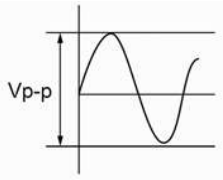
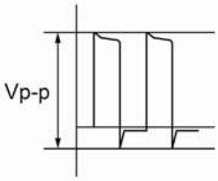
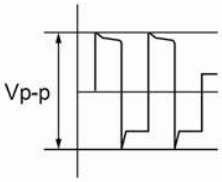
1. 工作电压 Operating voltage:

在交流电路或纹波电流电路中使用直流额定电压电容器时,请务必确保外加电压的Vp-p值或包含直流偏置电压的Vo-p值保持在额定电压范围内.

若向电路施加电压,开始或停止时可能会因谐振或切换产生暂时的不规则电压.请务必使用额定电压范围大于此不规则电压的电容器.

Be sure to maintain the Vp-p value of the applied voltage or the Vo-p which contains DC bias within therated voltage range.

When the voltage is started to apply to the circuit or it is stopped applying, the irregular voltage may be generated for a transit period because of resonance or switching. Be sure to use a capacitor within rated voltage containing this irregular voltage.

直流电压 DC voltage	直流+交流电压 DC+AC voltage	交流电压 AC voltage	冲击电压（1） Pulse voltage(1)	冲击电压（2） Pulse voltage(2)
				

2. 工作温度和自身发热 Operating temperature and self-generated heat:

电容器的表面温度应保持在其额定工作温度范围的上限以下.务必考虑到电容器自身发出的热量.电容器在高频电流、冲击电流等中使用时可能会因介电损耗自身发热.所施加之正弦波电压的频率应低于200kHz.外加电压应使自身发热等负荷在25℃周围温度条件下不超过20℃范围.测量时应使用ø0.1mm小热容量的 (K) 的热电偶,而且电容器不应受到其它组件的散热或周围温度波动影响.

过热可能会导致电容器特性及可靠性下降.(切勿在冷却风扇运转时进行测量,否则无法确保测量数据的精确性.)

Keep the surface temperature of a capacitor below the upper limit of its rated operating temperature range. Be sure to take into account the heat generated by the capacitor itself. When the capacitor is used in a high-frequency current, pulse current or the like, it may have the self-generated heat due to dielectric-loss. The frequency of the applied sine wave voltage shall be lower than 200kHz.Applied voltage should be the load such as self-generated heat is within 20℃ on the condition of atmosphere temperature 25℃. When measuring, use a thermocouple of small thermal capacity-K of Φ0.1mm and be in the condition where capacitor is not affected by radiant heat of other components and wind of surroundings.

Excessive heat my lead to deterioration of the capacitor's characteristics and reliability.(Do not measure when the cooling fan is running, otherwise unable to ensure the accuracy of the measurement data .)

3. 耐电压的测试条件Test condition for withstanding voltage:

3.1 测试设备Test equipment:

交流耐电压的测试设备应具有能够产生类似于50/60Hz正弦波的功能,如果施加变形的正弦波或超过规定电压值的超载电压,则可能会导致故障.

Test equipment for AC withstanding voltage shall be used with the performance of the wave similar to

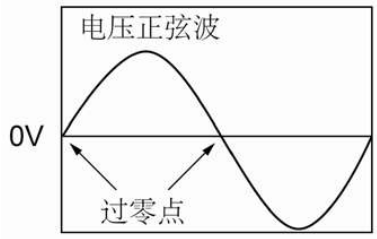
50/60 Hz sine waves.

If the distorted sine wave or over load exceeding the specified voltage value is applied, the defective may be caused.

3.2 电压外加方法Voltage applied method：

施加耐电压时,电容器的引线或端子应与耐电压测试设备的输出端连接牢固,然后再将电压从近零增加到测试电压.

如果测试电压不从近零逐渐提高而是直接施加在电容器上,则施加时应包含过零点*.测试结束时,测试电压应降到近零,然后再将电容器引线或端子从耐电压测试设备的输出端取下.



如果测试电压不从近零逐渐提高而是直接施加在电容器上，则可能会出现浪涌电压,从而导致故障.

*过零点是指电压正弦通过0V的位置. 参见右图:

When the withstanding voltage is applied, capacitor's lead or terminal shall be firmly connected to the output of the withstanding voltage test equipment, and then the voltage shall be raised from near zero to the test voltage.

If the test voltage without the raise from near zero voltage would be applied directly to capacitor, test voltage should be applied with the *zero cross. At the end of the test time, the test voltage shall be reduced to near zero, and then capacitor's lead or terminal shall be taken off the output of the withstanding voltage test equipment.

If the test voltage without the raise from near zero voltage would be applied directly to capacitor, the surge voltage may arise, and therefore, the defective may be caused.

ZERO CROSS is the point where voltage sine wave pass 0V.- See the right figure.

4. 失效安全性Fail-Safe：

如果电容器破损,会导致短路电路故障.务必在本产品上适当提供例如保险丝等自动防故障功能,以免导致电击、火灾、或冒烟等.

When capacitor would be broken, failure may result in a short circuit. Be sure to provide an appropriate fail-safe function like a fuse on your product if failure would follow an electric shock, fire or fume.

5. 储存环境Storage condition：

电容器的绝缘涂层不具有良好密封作用.因此,请勿将电容器存放在腐蚀性气体中,尤其是存在氯气、硫气、酸、碱、盐等的场所.同时应防潮.在对本产品进行清洗、覆膜或封膜前,请先在指定设备上测试经清洗、覆膜或封膜的产品的性能,以确定上述过程不会影响产品质量.电容器应存放在下列条件的场所:

环境温度:-25℃——+50℃;相对湿度:40℃时不大于90%;气压:40——106KPA

请在12个月内使用电容器, 若超期须重新提交检验.

使用本品时如忽略上述警告事项,则在严重情况下可能导致短路,并引起冒烟或局部离散.

The insulating coating of capacitors does not form a perfect seal; therefore, do not use or store capacitors

in a corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. And avoid exposure to moisture. Before cleaning, bonding, or molding this product, verify that these processes do not affect product quality by testing the performance of a cleaned, bonded or molded product in the intended equipment. Capacitors should be stored in the following conditions:

The environment temperature : -25℃～+50℃; Relative humidity : 40 ℃ is not greater than 90%

Air pressure : 40～106KPA

Use capacitors within 12 months, If exceed the time limit need to submit inspection.

Failure to follow the above cautions may result, worst case, in a short circuit and cause fuming or partial dispersion when the product is used.

6. 焊接、安装与使用Soldering 、mounting and use:

6.1 振荡与冲击Vibration and impact

使用时请勿使电容器或引线受到过度冲击或振荡.

When using do not make the capacitor or lead by excessive impact or vibration.

6.2 焊接Soldering

将该产品焊接在PCB/PWB上时,不应超出电容器的耐焊接热规格,本产品过热会使内部接点锡焊料熔化,导致温度骤变,而造成陶瓷组件产生裂纹.

当使用烙铁焊接电容器时,应遵循以下条件:

烙铁头温度: 最高400℃;烙铁功率: 最大50W;焊接时间: 最多3.5秒

When soldering this product to a PCB/PWB, do not exceed the solder heat resistance specification of the capacitor. Subjecting this product to excessive heating could melt the internal junction solder, Lead to temperature shock , Resulting in the ceramic element to produce crack.

When soldering capacitor with a soldering iron, it should be performed in following conditions:

Temperature of iron-tip: 400 degrees C. max.

Soldering iron wattage: 50W max.

Soldering time: 3.5 sec. max.

7. 清洗（超声波清洗）Cleaning (ultrasonic cleaning):

进行超声波清洗时,应遵守下列条件:

洗涤槽容量: 20瓦特输出功率/每升或以下;洗涤时间: 最多5分钟;

不得直接振荡PCB/PWB.过度的超声波洗涤会导致引线的超载损坏.

To perform ultrasonic cleaning, observe the following conditions.

Rinse bath capacity: Output of 20 watts per liter or less. Rinsing time: 5 minutes max.

Do not vibrate the PCB/PWB directly.Excessive ultrasonic cleaning may lead to fatigue destruction of the lead wires.

□运输Transport：

电容器在运输途中,要注意避免阳光直射,雨、雪、雾、水浸透等.

In transit, Capacitors should be avoided direct sunlight, rain, snow, fog, water soaked and so on.