



ALUMINUM ELECTROLYTIC CAPACITORS

TECHNICAL NOTE

((3) The treatment after soldering should not cause the following mechanical stress:

- a. The capacitors should not be inclined or twisted
- b. The capacitor touches the other PCB
- c. Prevent other objects from hitting the capacitor
- (4) Don't use the rinsing liquid to clean the capacitor. However, when it is necessary to do the cleaning, it should be done within the range specified in the capacitor operation standard.
- (5) For those capacitors necessary to be cleaned, the following items should be confirmed during cleaning.
 - a. The pollution management for the rinsing liquid (conductivity, PH value, gravity, water content etc.)
 - b. After cleaning, the capacitors can not be sealed under the environment with rinsing liquid or put into a sealed container. Use the hot air (below the max. working temperature) to dry the PCB and capacitors and eliminate the remained rinsing liquid.
- (6) Don't use the fixing agent with halogen content and the epoxy resin coating material.
- (7) Please confirm the following items while using the fixing agent and the coating material.
 - a. No soldering residue and dirt should exist in between the PCB and the capacitor.
 - b. Before using the fixing agent and epoxy coating material, make the drying treatment to take away as much as possible the remained rinsing liquid and prevent the holes on the PCB from being blocked.
 - c. The heat curing condition for the fixing agent and epoxy resin coating material according to the requirement of the specification

3. During assembling

- (1). During assembling, following points should be observed: Don't let the positive and negative electrodes to contact. No conductive material is allowed to exist between the positive and negative electrodes in order to avoid short circuit.
- (2). Please confirm the environment in which the capacitors are assembled.
 - a. Don't contact the water or oil or place them under dewy environment.
 - b. Don't subject them to direct sunshine, Ozone, Ultraviolet ray and radiation.
 - c. Don't subject the capacitors to the environment with poisonous gas (hydrogen sulphide, sulphurous acid, ammonia solution, chlorine etc.)
 - d. The vibration and impact should not exceed the range specified in the specifications.

4. The routine inspection

The capacitors to be used in factories should make regular inspection. The items to be inspected include visual appearance inspection and the electrical property testing.

5. Unexpected situations

- (1). During assembling, if the explosion-proof vent opens, please turn off the power, or pull out the plug;
- (2). When the explosion-proof vent activated, there is high temperature gas (Over 100°C) spraying out. Don't place your face close to it. In case the gas enters into your eyes, please wash your eyes with water immediately. Don't taste the electrolyte, and if there is electrolyte on your skin, please wash the skin with soap.

6. The fumigation treatment

When the capacitors including the electronic products assembled with capacitors are to be exported, they should be subjected to fumigation treatment with potassium bromide and other halogenides. In doing so with this method, it may cause corrosion reaction due to the halogen ions. So special attention should be paid during the operation. While making the fumigation treatment, don't let the fumigation liquid to directly contact the electronic products. And if necessary, drying treatment should be made.

7. The shortage condition

- (1) Temperature: 5 to 30°C, Humidity: Below 75%
- (2) The environment not suitable for assembling capacitors (3(2)) is also forbidden to store the capacitors.

8. The handling of rejects

The rejected capacitors can be handled in the following ways:

- (1) To drill a hole on the capacitor, or press it flat and then burn it;
- (2) When the capacitors are not to be burned, they can be handed over to the professional waste collecting personnel to make deep bury treatment and so on.

(3) 焊接后的处理应不产生以下的机械应力:

- a) 电容器发生倾倒、扭转;
- b) 电容器碰到其他线路板;
- c) 使其它物体碰撞到电容器;

(4) 电容器不要用洗净剂洗净, 不过, 在有必要洗净的情况下对电容器进行洗净, 必须在产品规格书规定的范围内进行;

(5) 对有必要洗净的电容器, 洗净时, 须确认下列内容:

- a) 洗净剂污染管理 (电导率、PH值、比重、水分等);
- b) 洗净后, 不能保管在洗净液环境中及密闭容器中, 要采用 (最高使用温度以下的) 热风干燥印刷电路板及电容器, 使之不残留洗净液成分。

(6) 不使用含卤素的固定剂、树脂涂层剂。

(7) 使用固定剂、涂层剂时, 请确认以下内容:

- a) 电路板与电容器之间, 不能残留焊接残渣及污垢;
- b) 固定剂、涂层剂吸附前, 尽可能不残留洗净成分, 进行干燥处理, 使印刷孔不堵塞;
- c) 固定剂、涂层剂热硬化条件, 按规定说明书要求执行。

3. 组装使用

(1) 组装使用中, 请遵守以下内容: 电容器的端子间不要直接接触, 另外, 不要让导体物质引起正负极短路;

(2) 请确认所安装电容器所处环境

- a) 不要与水或油污接触或处于结露状态
- b) 不要让日光、O₃、紫外线及放射线直接照射到电容器上
- c) 不要处于充满有害气体环境 (硫化氢、亚硫酸、亚硝酸、氨水、Cl₂ 等)
- d) 震动及冲击不要超过样本或规格说明中规定值;

4. 保守点检

工厂企业用的电容器, 必须定期点检, 定期点检项目包括外观检查及电性能的测试;

5. 意外情况

(1) 组装使用过程中, 如电容器防爆阀打开, 请切断组装主电源或拔下电源线插头;

(2) 电容器防爆阀动作时, 因有超过100°C高温气体喷出, 脸不要接近。喷出的气体进入眼睛时, 立即用水清洗眼睛。不要尝电容器的电解液, 电解液溅到皮肤上时, 用肥皂清洗;

6. 熏蒸处理

当组装电容器的电子产品出口到海外时, 用溴化钾等卤化物进行熏蒸处理。因采用此方法可能会产生因卤素离子而引起的腐蚀反应, 请务必小心。熏蒸时, 熏蒸液不能直接接触电子产品, 同时有必要进行充分干燥处理, 估计有熏蒸液附着及干燥不充分时, 有必要先查询一下安全性;

7. 储存条件

- (1) 在温度为5~30°C, 湿度为75%以下的室内储存
- (2) 不要保存在组装使用中禁用的环境及同等条件下

8. 报废情况

废弃的电容器, 可任选下面一种方法进行处理:

- (1) 电容器上开孔或压碎后焚烧;
- (2) 电容器不焚烧时, 交给专职废品回收人员进行深埋等处理。