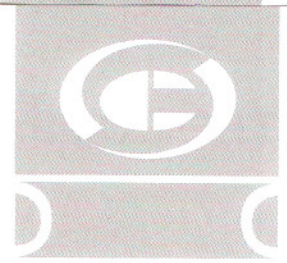


1. 使用低阻抗電路時，請將使用電壓設定在額定電壓的 $1/3$ 以下，使用其他電路時，請將使用電壓設立在額定電壓 $1/2$ 以下。 For circuits with low resistance circuit, make the use voltage be $1/3$ or under of the rated voltage, in general circuit, make the use voltage be $1/2$ or under of the rated voltage.
2. 鉭電容器在電路中，應控制瞬間大電流對電容器的衝擊，建議串聯電阻以緩解這種衝擊。請將 $3\Omega/V$ 以上的保護電阻器串聯在電容器上，以限制電流在 $300mA$ 以下，無法插入保護電阻器時，請使用額定電壓的 $1/3$ 以下的電壓。 In case of circuits with large instantaneous rush current or rapid charging/discharging circuits, connect the protection resistor of $3\Omega/v$ or more in series to the capacitor to limit the current to $300mA$ or less. When the protection resistor cannot be inserted, lower the use voltage to $1/3$ or under of the rated voltage.
3. 請在電容器規定的容許紋波電壓內使用。使用時，直流偏壓與交流分壓峰值之和不得超過電容器的額定電壓值。設計電路中鉭電容器上疊加直流電壓的波動不能超過額定電壓值或施加反向電壓。 Use the capacitors within the permissible ripple voltage specified independently. Use in the range that the sum of the DC voltage value and the peak value of ripple voltage does not exceed the rated voltage. Design not to apply over voltage made by fluctuation of superimposed DC voltage or reverse voltage to the capacitors.
4. 請在電容器的規定使用溫度範圍內使用。使用溫度超過 $+85^{\circ}C$ ，請以降額電壓作?使用電壓。 Use the capacitors within the specified use temperature range. In case use temperature exceeds $+85^{\circ}C$, apply the reduced voltage shown in the below figure as the rated voltage.
5. 使用環境environmental conditions：請勿在以下環境中使用。 Do not use the equipment fit with the capacitor in the below environment.
 - 電容器直接接觸水、鹽水、油等的環境。 Environment where capacitors are directly splashed with water, salt water and oil.
 - 陽光直射電容器的環境。 Environment where capacitors are directly exposed to sunlight.
 - 處於高溫，高濕狀態、電容器表面發生結露的環境。 Environment in high temperature and humidity causing dewing on capacitor surface.
 - 電容器接觸各種活性氣體環境。 Environment where capacitors touch various active gases.
 - 有酸或鹼的環境。 Acid and alkaline atmosphere.
 - 有高頻波誘導的環境。 Environment with high frequency induction.
 - 有過度振動或衝擊的環境。 Environment with excessive vibration and shock.



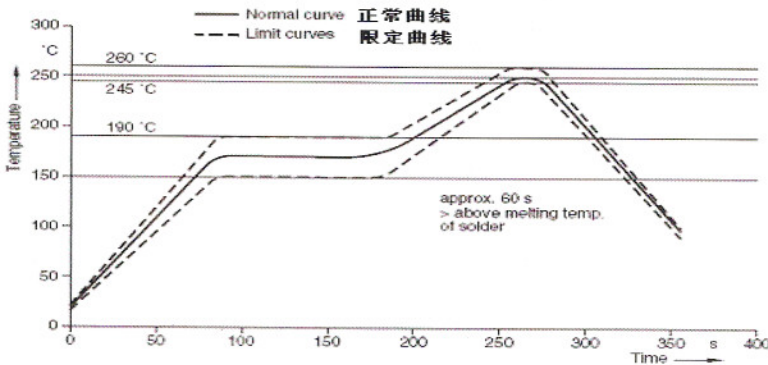
1. 貯存條件 Storage condition : 環境溫度 Environmental temperature : $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
相對溫度 Relative humidity : 不大於 70%。 No more than 70%
2. 貯存期 Storing period : 自生產入庫之日起不超過一年半。 No more than one and half year since date of stocking.
3. 如長期放置在高溫、高濕的環境中，將使端子的可焊性下降，同時也將使電容器的性能降低。 If left in the atmosphere of high temperature and high humidity for a long time, solderability of the terminals is decreased and performance of the capacitors is lowered.

推薦焊接條件 Recommended Soldering condition

片式鉭電容器(無鉛)、無論是手工焊還是再流焊，都應避免使用活性高、酸性強的助焊劑，以免清洗不淨後滲透，腐蝕和擴散，而影響其可靠性。 Flow method or re-flow method whichever is applied for chip type capacitors (ROHS), high-activated flux with string acid will not be used to prevent permeation, corrosion and diffusion from incomplete cleaning, thereby resulting in decreasing reliability.

典型條件使用：Chip type capacitors (ROHS) can be applied to re-flow method. Take the conditions below shown:

再流焊法（氣氛加熱法） Re-flow method (Atmosphere heating method)



推薦焊接條件：CS無鉛產品一般使用回流焊焊接。

Recommended Soldering condition : The CA45 product (ROHS) generally uses Re-flow soldering.

預加熱： $150^{\circ}\text{C} \pm 15^{\circ}\text{C}$ / 60-90秒。 Pre-heating : $150^{\circ}\text{C} \pm 15^{\circ}\text{C}$ / 60-90s.

最大升溫速率： 2.5°C / 秒。 Max. peak gradient : 2.5°C / s.

波峰溫度： 250°C - 260°C ，此溫度下持續時間 3-5秒。

The peak temperature : 250°C - 260°C for 3-5s.

230°C 以上時間是：最大40秒。 Time at $>230^{\circ}\text{C}$: 40s Max.

- 如焊接面比端子面大得過多，焊錫熔化時可能引起錯位。 If the land is excessively larger than the size of the terminal surface, dislocation may occur when solder melts.