

# 产品规格书

## SPECIFICATION

产品名称 PRODUCTION NAME : 树脂包封固体电解质钽电容器  
(ROHS)Epoxy-coated Solid Electrolytic  
Tantalum Capacitors (ROHS)

蔽司料号 OUR PART NO. : CA42-35V22uF-K

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### 1. 适用范围 Scope

本规格书适用于 **35V22uF** 树脂包封固体电解质钽电容器 (ROHS)。

This specification applies to **35V22uF** Epoxy-coated Solid Electrolytic Tantalum Capacitor (ROHS).

## 2. 技术规范 Technical Specification

表 I table I

容量范围 Nominal cap. Range	22 $\mu$ F
容量偏差 capacitance tolerance	$\pm 10\%$
额定电压(V) Rated voltage	35
降额电压(V) Derating Voltage $\leq +125^{\circ}\text{C}$	25
浪涌电压(V) Surge voltage $\leq +85^{\circ}\text{C}$	40
温度范围 Temperature range	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
漏电流 Leakage Current	$\leq 6.5 \mu\text{A}$
损耗角正切 Dissipation Factor ( $\tan \delta$ )	$\leq 0.08$
寿命试验 The life test	1000 Hr

注:1、漏电流测试条件: 串联保护电阻:1000 $\Omega$ , 测量电压: 额定电压, 测量时间: 1 分钟。

2、容量、损耗测试条件: 测量电路: 等效串联电路, 测量频率: 100Hz $\pm 10\%$ , 最大测量电压: 0.5Vrms, +1.5Vdc。

Note: 1. Leakage Current test condition: Series protective resistor:1000 $\Omega$ , Measuring voltage: rated voltage, Measuring time: 1 minutes

2. Capacitance, Dissipation Factor test condition: Measurement circuit: Equivalent series circuit, Measuring frequency: 100Hz $\pm 10\%$ , Measuring voltage max.: 0.5Vrms, +1.5Vdc.

## 3. 温度特性 Temperature Characteristic

表 II Table II

容量 Cap. ( $\mu$ F)	容量变化 Change in cap. (%)			损耗最大值 DF max. (%)				漏电流最大值 DCL max. ( $\mu$ A)		
	-55 $^{\circ}\text{C}$	+85 $^{\circ}\text{C}$	+125 $^{\circ}\text{C}$	-55 $^{\circ}\text{C}$	+20 $^{\circ}\text{C}$	+85 $^{\circ}\text{C}$	+125 $^{\circ}\text{C}$	+20 $^{\circ}\text{C}$	+85 $^{\circ}\text{C}$	+125 $^{\circ}\text{C}$
10	$\pm 10$	$\pm 15$	$\pm 25$	12	10	12	12	3.2	32	40

## 4. 形状及尺寸 Appearance & Dimensions

### 4.1 外形尺寸 Appearance & Dimensions

(如图 4.1 Fig. 4.1)

表 III Table III  
(单位 unit: mm)

壳号 case size	$D_{MAX}$	$H_{MAX}$	$h(\pm 0.5mm)$	$d(\pm 0.05mm)$
D	6.5	11.0	2.5	0.5

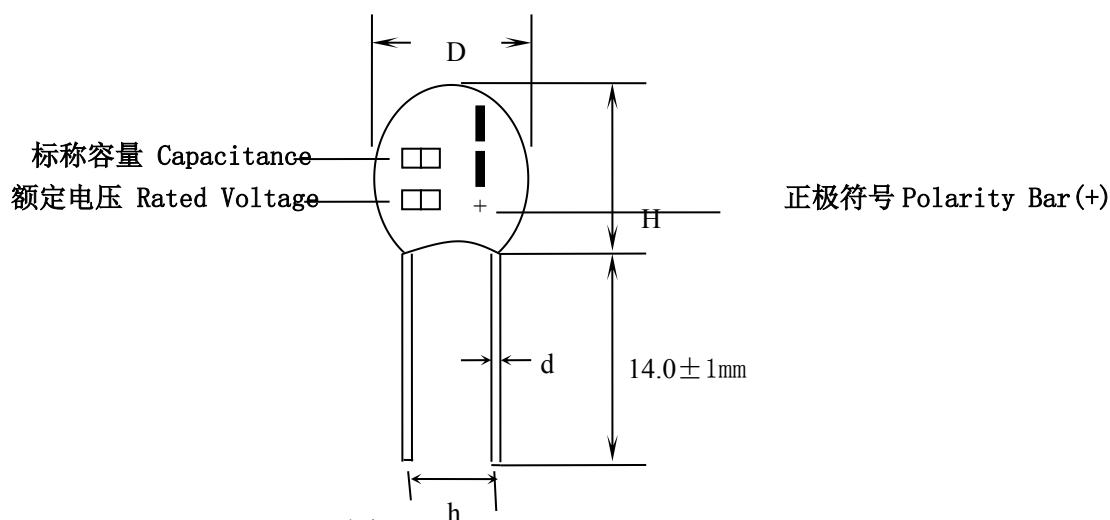


图 4.1 Fig. 4.1


允许有其它引线形式(other lead styles are available)

## 5. 标志 Marking

如图 4.1, 电容器本体上应标出标称容量、额定电压和正极符号(+)

Fig. 4.1, capacitance, DC voltage and polarity are laser marked on the capacitor body

## 6. 无铅产品识别标识 The Lead-free Product Identifying Label

为识别出无铅产品, 我公司在包装袋上贴出无铅标识“”。For identify lead-free product, our company will attach the lead-free label on the packaging.

## 7. 包装 Pack

散件 Bulk

用塑料袋包装 Packing product in plastic bag.

A/B/C 壳 A/B/C case: 每袋装 1000 支, 1000pcs per bag;

D/E 壳 D/E case: 每袋装 500 支, 500pcs per bag;

F 壳 F case: 每袋装 250 支 250pcs per bag;

## 8. 安装方法 The Method of Mounting

推荐安装方法: 电容器在使用时直插安装。在做振动、碰撞试验时应固定本体和引线, 其引线固定点距本体  $6\pm 1\text{mm}$  处。Recommend the method of mounting: the capacitor directly insets PCB when it is used. The body and the lead are steadied in the application of the vibration and shock tests, the distance between the body and the mounting point shall be  $6\pm 1\text{mm}$ .

推荐焊接条件: 树脂包封钽电容器 (ROHS) 一般使用波峰焊接。

预加热:  $150^{\circ}\text{C}\pm 15^{\circ}\text{C}/60\text{--}90$  秒

最大升温速率:  $2.5^{\circ}\text{C}/\text{秒}$

波峰温度:  $250^{\circ}\text{C}\text{--}260^{\circ}\text{C}$ , 此温度下持续时间 3-5 秒。

$230^{\circ}\text{C}$  以上时间是: 最大 40 秒。

Recommended Soldering condition: resin-coated tantalum capacitor (ROHS) generally uses wave soldering.

Pre-heating:  $150^{\circ}\text{C}\pm 15^{\circ}\text{C}/60\text{--}90\text{s}$

Max. peak gradient:  $2.5^{\circ}\text{C}/\text{s}$

The peak temperature is  $250^{\circ}\text{C}\text{--}260^{\circ}\text{C}$  for 3-5s

Time at  $>230^{\circ}\text{C}$ : 40s Max.

## 9. 使用注意事项 Note in use

9.1 使用低阻抗电路时, 请将使用电压设定在额定电压的  $1/3$  以下; 使用其它电路时, 请将使用电压设立在额定电压  $1/2$  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.

9.2 钽电容器在电路中, 应控制瞬间大电流对电容器的冲击, 建议串联电阻以缓解这种冲击。请将  $3\Omega / \text{V}$  以上的保护电阻器串联在电容器上, 以限制电流在  $300\text{mA}$  以下, 无法插入保护电阻器时, 请使用额定电压的  $1/3$  以下的电压。In case of circuits with large instantaneous rush current or rapid charging/discharging circuits, connect the protection resistor of  $3\Omega / \text{v}$  or more in series to the capacitor to limit the current to  $300\text{mA}$  or less. when the protection resistor can not be inserted, lower the use voltage to  $1/3$  or under of the rated voltage .

9.3 请在电容器规定的容许纹波电压内使用。使用时, 直流偏压与交流分压峰值之和不得超过电容器的额定电压值。设计电路中钽电容器上叠加直流电压的波动不能超过额定电压值或施加反向电压。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.

9.4 请在电容器的规定使用温度范围内使用。使用温度超过+85℃, 请以降额电压作为使用电压, Use the capacitors within the specified use temperature range. In case use temperature exceeds +85℃, apply the reduced voltage shown in the below figure as the rated voltage.

#### 9.5 使用环境 environmental conditions

请勿在以下环境中使用 do not use the equipment fit with the capacitor in the below environment.

- 电容器直接接触水、盐水、油等的环境。Environment where capacitors are directly splashed with water, salt water and oil .

- 阳光直射电容器的环境。Environment where capacitors are directly exposed to sunlight .

- 处于高温, 高湿状态、电容器表面发生结露的环境。Environment in high temperature and humidity causing dewing on capacitor surface .

- 电容器接触各种活性气体环境。Environment where capacitors touch various active gases .

- 有酸或碱的环境。Acid and alkaline atmosphere .

有高频波诱导的环境。Environment with high frequency induction .

- 有过度振动或冲击的环境。Environment with excessive vibration and shock .

## 10. 贮存 Storage

### 10.1 贮存条件 storage condition

环境温度 environmental temperature: -10℃ ~ +40℃;

相对湿度 relative humidity: 不大于 no more than 70%;

### 10.2 贮存期 storing period

自生产入库之日起不超过一年半。No more than one and half year since date of stocking.

## 11. ROHS 限定物质含量 ROHS Restricted Substance Content

本规范确定的树脂包封钽电容器 (ROHS) 中的物质含量满足 2011/65/EU 和 (EU)2015/863 标准。The substance contents of determining resin-coated tantalum capacitor (ROHS) meet 2011/65/EU 和 (EU)2015/863 criteria in specification.

新云产品 XinYun Product	系列 Series	ROHS 限定材料 ROHS Restricted Material					
		Cd	Pb	Hg	Cr/Cr r (VI)	PBB	PBDE
		<0.01 %	<0.1 %	<0.1 %	<0.1 %	<0.1 %	<0.1 %
树脂包封钽电容器 resin-coated tantalum capacitor	CA42	√	√	√	√	√	√

√=满足标准 meets criteria