

1、SCOPE

This specification applies to CA306 series axial wet tantalum electrolytic capacitor (180°C) produced by Shenzhen Be-Top Electronic Components Co., Ltd.



2、Brief Introduction

CA306 series wet electrolyte tantalum capacitors (180°C) are silver coating sealed with polar axial leads. The series capacitors are characterized by small size, low DC Leakage, stable performances, high reliability and long life. It has good performance in high-temp environment. It can be used in the conditions of 180°C. CA306 Series meets the standard QJ/PWV313-2009 and it is widely used in oil & gas exploration & drilling equipments.

3、General Specification

- 1) Operating Temperature: -40 °C ~+180 °C (using derating voltage when the temperature is higher than 85°C). (see table 1)
- 2) Capacitance Tolerance: ±10% (K) , ±20% (M)
- 3) Current Leakage:
 - At 25 °C: $I_0 \leq 0.0002C_R U_R$ (μA) or 2μA (Whichever is greater)
 - At 180 °C: $I_0 \leq 0.04C_R U_R$ (μA) or 40μA (Whichever is greater)
- 4) Dissipation Factor (see table 1).
- 5) Product Dimension and max weight (see table 2)

Table 1: Relation between Rated Voltage, Derating Voltage and Capacitance

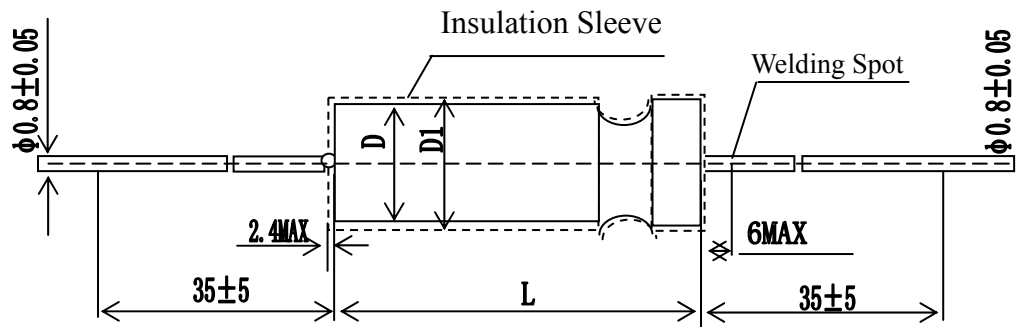
| Rated Voltage U_R (V) +85°C | Derating Voltage U_C (V) | | Case Code | Capacitance C_R (μ F) | tg δ (%) | Rated Voltage U_R (V) +85°C | Derating Voltage U_C (V) | | Case Code | Capacitance C_R (μ F) | tg δ (%) | |
|-------------------------------------|-------------------------------|---------|-----------|-----------------------------|----------|-------------------------------------|-------------------------------|---------|-----------|-----------------------------|----------|-----|
| | +155 °C | +180 °C | | | | | +155 °C | +180 °C | | | | |
| | 10 | 6.3 | | | | | 6.3 | 1 | | | | 6.8 |
| 1 | | | 10 | 25 | 5 | 220 | | 50 | | | | |
| 1 | | | 15 | 25 | 6 | 330 | | 50 | | | | |
| 1 | | | 22 | 25 | 1 | 1.0 | | 20 | | | | |
| 1 | | | 33 | 35 | 1 | 1.5 | | 20 | | | | |
| 1 | | | 47 | 35 | 1 | 2.2 | | 20 | | | | |
| 40 | | 6.3 | 6.3 | 2 | 68 | 35 | 40 | 25 | 20 | 1 | 3.3 | 20 |
| | | | | 2 | 100 | 50 | | | | 1 | 4.7 | 20 |
| | | | | 3 | 150 | 50 | | | | 1 | 6.8 | 20 |
| | | | | 3 | 220 | 50 | | | | 1 | 10 | 20 |
| | | | | 4 | 330 | 50 | | | | 1 | 15 | 20 |
| | | | | 5 | 470 | 60 | | | | 2 | 22 | 20 |
| | | | | 6 | 680 | 60 | | | | 2 | 33 | 30 |

| Rated Voltage $U_R(V)$ +85°C | Derating Voltage $U_C(V)$ | | Case Code | Capacitance $C_R(\mu F)$ | $tg \delta$ (%) | Rated Voltage $U_R(V)$ +85°C | Derating Voltage $U_C(V)$ | | Case Code | Capacitance $C_R(\mu F)$ | $tg \delta$ (%) |
|------------------------------------|------------------------------|--------|-----------|-----------------------------|--------------------|------------------------------------|------------------------------|--------|-----------|-----------------------------|--------------------|
| | +155°C | +180°C | | | | | +155°C | +180°C | | | |
| 16 | 10 | 10 | 1 | 1.0 | 25 | 40 | 25 | 20 | 3 | 47 | 30 |
| | | | 1 | 1.5 | 25 | | | | 4 | 68 | 30 |
| | | | 1 | 2.2 | 25 | | | | 4 | 100 | 40 |
| | | | 1 | 3.3 | 25 | | | | 5 | 150 | 40 |
| | | | 1 | 4.7 | 25 | | | | 6 | 220 | 40 |
| | | | 1 | 6.8 | 25 | | | | 1 | 1.0 | 20 |
| | | | 1 | 10 | 25 | 1 | 1.5 | 20 | | | |
| | | | 1 | 15 | 25 | 1 | 2.2 | 20 | | | |
| | | | 1 | 22 | 25 | 1 | 3.3 | 20 | | | |
| | | | 1 | 33 | 35 | 1 | 4.7 | 20 | | | |
| | | | 2 | 47 | 35 | 1 | 6.8 | 20 | | | |
| | | | 2 | 68 | 35 | 2 | 10 | 20 | | | |
| | | | 3 | 100 | 50 | 2 | 15 | 20 | | | |
| | | | 3 | 150 | 50 | 3 | 22 | 20 | | | |
| | | | 4 | 220 | 50 | 4 | 33 | 30 | | | |
| | | | 5 | 330 | 50 | 4 | 47 | 30 | | | |
| 6 | 470 | 60 | 5 | 68 | 30 | | | | | | |
| 25 | 15 | 13 | 1 | 1.0 | 25 | 63 | 40 | 32 | 6 | 100 | 40 |
| | | | 1 | 1.5 | 25 | | | | 1 | 1.0 | 20 |
| | | | 1 | 2.2 | 25 | | | | 1 | 1.5 | 20 |
| | | | 1 | 3.3 | 25 | | | | 1 | 2.2 | 20 |
| | | | 1 | 4.7 | 25 | | | | 1 | 3.3 | 20 |
| | | | 1 | 6.8 | 25 | | | | 1 | 4.7 | 20 |
| | | | 1 | 10 | 25 | 2 | 6.8 | 20 | | | |
| | | | 1 | 15 | 25 | 2 | 10 | 20 | | | |
| | | | 1 | 22 | 25 | 3 | 15 | 20 | | | |
| | | | 2 | 33 | 35 | 3 | 22 | 20 | | | |
| | | | 2 | 47 | 35 | 4 | 33 | 30 | | | |
| | | | 3 | 68 | 35 | 4 | 47 | 30 | | | |
| | | | 3 | 100 | 50 | 5 | 68 | 30 | | | |

Table 2: Product Dimension and Max Weight

| Case Code | Max Weight (g) | Without Insulation Sleeve | | With Insulation Sleeve | |
|-----------|-------------------|---------------------------|---------|------------------------|-----------|
| | | D±0.5(mm) | L±2(mm) | D ₁ max(mm) | L max(mm) |
| 1 | 5 | 5 | 14 | 5.8 | 15 |
| 2 | 7 | 6 | 16 | 6.8 | 17 |
| 3 | 10 | 8 | 16 | 8.8 | 17 |
| 4 | 11 | 8 | 22 | 8.8 | 23 |
| 5 | 15 | 10 | 22 | 10.8 | 23 |
| 6 | 17 | 10 | 25 | 10.8 | 26 |

Figure of Product



How to order

CA306-106M025

| CA306 | 106 | M | 025 |
|---|----------------|------------------|---------------|
| Type | Capacitance | Tolerance | Rated Voltage |
| CA306 Series axial wet tantalum capacitor (180°C) | 106=10 μ F | K=±10% M=±20% | 10V=010 |
| | | | 16V=016 |
| | | | 25V=025 |
| | | | 40V=040 |
| | | | 63V=063 |
| | | | 100V=100 |