# CA501 Series Non-solid Electrolytic Tantalum Capacitor

## Brief Introduction

- Silver Fabric , Hermetically-Sealed , Tubular, Axial-lead , With insulation sleeve , Heteropolarity ;
- Stable in Electrical Characteristics, High reliability, Long life-span, Low DF&DCL;
- Excellent working ability under High Temperature, Available in 175℃;
- Applying in Petroleum deep-well' s measurement &drilling such High-Temperature resistance Electrical Equipments with DC& Impulse Circuit for Military and Civil use;
- Operative Standard: QJ/PWV223-2008

## Features

- Operating Temperature Range: -55℃~+175℃(when >155℃ , with rated voltage derating)
- Capacitance Tolerance: K: ±10% ; M:±20% , Q : -10%~+30%;
- DF at 25℃ , 100Hz : See Table2 ;
- DCL : at 25℃ $I \le 0.002 C_R U_R$ ( μA ) or2μA ( Choose the greater one )

  at 85℃ $I \le 0.01 C_R U_R$ ( μA ) or 10μA ( Choose the greater one )

  At 155℃ $I \le 0.03 C_R U_R$ ( μA ) or 30μA ( Choose the greater one )

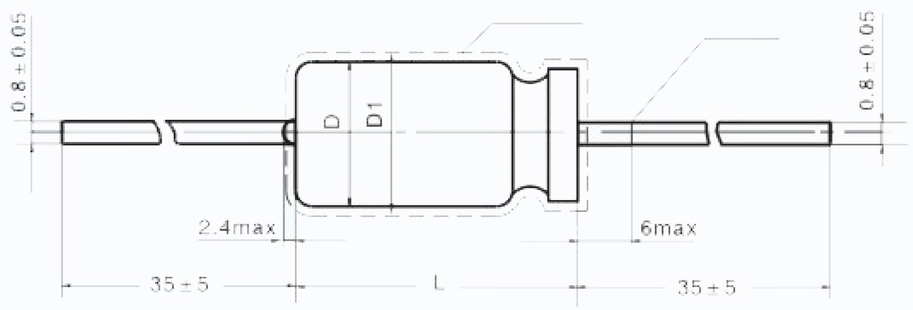


Table1 Dimensions and Max weight

| Case Size | Max Weight | with no Insulation Sleeve | | with Insulation Sleeve | |
|---|---|---|---|---|---|
| | | D±0.5 ( mm ) | L±2 ( mm ) | $D_1$max ( mm ) | L max ( mm ) |
| 1 | 4 | 5 | 14 | 5.8 | 16 |
| 2 | 5 | 6 | 16 | 6.8 | 18 |
| 3 | 7 | 8 | 16 | 8.8 | 18 |
| 4 | 10 | 8 | 22 | 8.8 | 24 |
| 5 | 14 | 10 | 22 | 10.8 | 24 |
| 6 | 17 | 10 | 25 | 10.8 | 27 |
| 7 | 20 | 10 | 30 | 10.8 | 32 |

Table2 Electrical Characteristics

| $U_R$(V) Rated Voltage | $U_C$(V) Derating Voltage | Case Code | Nominal Capacitance $C_R$ ( μF) | tgδ (%) 25℃ |
|---|---|---|---|---|
| 6.3 | 3 | 1 | 22 | 45 |
| | | 1 | 33 | 45 |
| | | 1 | 47 | 45 |
| | | 1 | 68 | 45 |
| | | 2 | 100 | 50 |
| | | 2 | 150 | 50 |
| | | 3 | 220 | 70 |
| | | 3 | 330 | 75 |
| | | 4 | 470 | 95 |
| | | 4 | 680 | 95 |
| | | 5 | 1000 | 100 |
| | | 5 | 1200 | 120 |
| 10 | 5 | 1 | 15 | 40 |
| | | 1 | 22 | 40 |
| | | 1 | 33 | 40 |
| | | 1 | 47 | 45 |
| | | 1 | 68 | 45 |
| | | 2 | 100 | 50 |
| | | 2 | 150 | 60 |
| | | 3 | 220 | 65 |
| | | 3 | 330 | 80 |
| | | 4 | 470 | 85 |
| | | 4 | 680 | 85 |
| 16 | 8 | 1 | 4.7 | 20 |
| | | 1 | 10 | 30 |
| | | 1 | 15 | 30 |
| | | 1 | 22 | 35 |
| | | 1 | 33 | 35 |
| | | 1 | 47 | 40 |
| | | 2 | 68 | 40 |
| | | 2 | 100 | 45 |
| | | 3 | 150 | 45 |
| | | 3 | 220 | 70 |
| | | 4 | 330 | 80 |
| | | 4 | 470 | 85 |
| | | 5 | 680 | 90 |

| $U_R$(V) Rated Voltage | $U_C$(V) Derating Voltage | Case Code | Nominal Capacitance $C_R$ ( μF) | tgδ (%) 25℃ |
|---|---|---|---|---|
| 25 | 13 | 1 | 4.7 | 20 |
| | | 1 | 6.8 | 20 |
| | | 1 | 10 | 20 |
| | | 1 | 15 | 20 |
| | | 1 | 22 | 25 |
| | | 1 | 33 | 25 |
| | | 2 | 47 | 30 |
| | | 2 | 68 | 30 |
| | | 2 | 100 | 40 |
| | | 3 | 150 | 45 |
| | | 4 | 220 | 60 |
| | | 4 | 330 | 60 |
| | | 5 | 470 | 65 |
| | | 6 | 680 | 70 |
| 40 | 20 | 1 | 4.7 | 15 |
| | | 1 | 6.8 | 20 |
| | | 1 | 10 | 20 |
| | | 1 | 15 | 25 |
| | | 1 | 22 | 30 |
| | | 2 | 33 | 30 |
| | | 2 | 47 | 35 |
| | | 2 | 68 | 30 |
| | | 3 | 100 | 45 |
| | | 4 | 150 | 45 |
| | | 5 | 220 | 45 |
| | | 5 | 330 | 50 |
| | | 6 | 470 | 60 |
| | | 7 | 680 | 80 |
| 50 | 25 | 1 | 3.3 | 10 |
| | | 1 | 4.7 | 15 |
| | | 1 | 6.8 | 15 |
| | | 1 | 10 | 15 |
| | | 2 | 15 | 15 |
| | | 2 | 22 | 20 |
| | | 2 | 25 | 20 |
| | | 2 | 33 | 25 |
| | | 2 | 39 | 25 |

| $U_R$(V) Rated Voltage | $U_C$(V) Derating Voltage | Case Code | Nominal Capacitance $C_R$ ( μF) | tgδ (%) 25℃ |
|---|---|---|---|---|
| 50 | 25 | 3 | 47 | 25 |
| | | 4 | 68 | 35 |
| | | 4 | 100 | 35 |
| | | 5 | 150 | 30 |
| | | 6 | 220 | 35 |
| | | 6 | 330 | 40 |
| | | 7 | 560 | 50 |
| 63 | 32 | 1 | 3.3 | 10 |
| | | 1 | 4.7 | 15 |
| | | 1 | 6.8 | 15 |
| | | 1 | 10 | 15 |
| | | 2 | 15 | 15 |
| | | 2 | 18 | 15 |
| | | 2 | 22 | 20 |
| | | 3 | 33 | 25 |
| | | 3 | 39 | 25 |
| | | 3 | 47 | 25 |
| | | 4 | 68 | 35 |
| | | 4 | 75 | 35 |
| | | 4 | 82 | 35 |
| | | 5 | 100 | 35 |
| | | 6 | 150 | 30 |
| | | 6 | 220 | 35 |
| | | 7 | 470 | 50 |
| 75 | 37 | 1 | 3.3 | 10 |
| | | 1 | 4.7 | 10 |
| | | 1 | 6.8 | 15 |
| | | 2 | 10 | 20 |
| | | 2 | 15 | 25 |
| | | 3 | 22 | 35 |
| | | 3 | 33 | 35 |
| | | 4 | 47 | 33 |
| | | 5 | 68 | 30 |
| | | 6 | 120 | 30 |

Table2 Electrical Characteristics

| $U_R$(V) Rated Voltage | $U_C$(V) Derating Voltage | Case Code | Nominal Capacitance $C_R$ ( μF) | tgδ (%) 25℃ |
|---|---|---|---|---|
| 100 | 50 | 1 | 3.3 | 10 |
| | | 1 | 4.7 | 15 |
| | | 2 | 6.8 | 20 |
| | | 2 | 10 | 25 |
| | | 3 | 15 | 35 |
| | | 3 | 22 | 35 |
| | | 4 | 33 | 33 |
| | | 5 | 47 | 30 |
| | | 6 | 68 | 30 |
| | | 7 | 100 | 30 |
| | | 7 | 220 | 35 |

| $U_R$(V) Rated Voltage | $U_C$(V) Derating Voltage | Case Code | Nominal Capacitance $C_R$ ( μF) | tgδ (%) 25℃ |
|---|---|---|---|---|
| 125 | 63 | 1 | 2.2 | 10 |
| | | 1 | 3.3 | 10 |
| | | 2 | 4.7 | 15 |
| | | 2 | 6.8 | 25 |
| | | 3 | 10 | 25 |
| | | 3 | 15 | 30 |
| | | 4 | 22 | 35 |
| | | 5 | 33 | 30 |
| | | 6 | 47 | 35 |
| | | 6 | 56 | 40 |
| | | 7 | 100 | 50 |

P.S. : 1 Please do not use multimeter through the measuring procedures.

2 Capacitance and DF measured at :100Hz , $U_{_}=2.2^{0}_{-1.0}$V , $U\sim=1.0^{0}_{-0.5}$V, Frequency=100Hz.
Test only applied in series equivalent circuit.

3 Voltage derating is applied at +175℃. ( The DCL parameter should be read after 5minutes when it connected to the circuit ) .

4 Special size and demand could consult with us.