

# 175℃ HIGH TEMPERATURE TANTALUM CAPACITOR

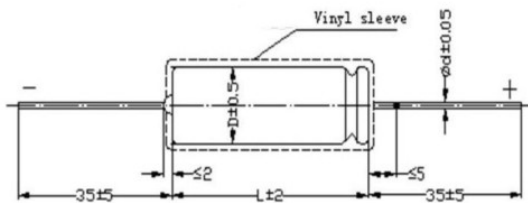
# CBGT

## CHARACTERS AND USE

- Silver case, gas seal, Cylindrical, Axial leads, High temperature sleeve, Polar
- Good electric performance, High reliability, long life, Low DF and LC.
- High temperature performance, Can use at 175 °C
- Suit for oil drilling deep well measurements and high temperature electronic devices  
DC or pulse circuit
- Implementation of standards: QJ/PWV223-2008
- Equative CA501 series

## Technical Performance

- Operation temperature:  $-55^{\circ}\text{C} \sim +175^{\circ}\text{C}$  ( $> 155^{\circ}\text{C}$  use derated voltage)
- Capacitance Tolerance:  $\pm 10\%$ ;  $\pm 20\%$ ;  $-10\% \sim +30\%$
- Dissipation Factor:  $25^{\circ}\text{C}$ , 100Hz (see table 1)
- Leakage Current:  $25^{\circ}\text{C}$   $I_o \leq 0.002 C_R U_R$  ( $\mu\text{A}$ ) or  $2 \mu\text{A}$  (whichever is greater)  
 $175^{\circ}\text{C}$   $I_o \leq 0.03 C_R U_R$  ( $\mu\text{A}$ ) or  $30 \mu\text{A}$  (whichever is greater)



CASE SIZE AND MAXIMUM WEIGHT

TABLE1

| Case code | Max Weight (g) | With Sleeve  |            | Without Sleeve |            |
|-----------|----------------|--------------|------------|----------------|------------|
|           |                | D ± 0.5 (mm) | L ± 2 (mm) | D 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         |

RATED VOLTAGE, DERATED VOLTAGE, CAPACITANCE, CASE CODE AND DISSIPATION FACTOR

TABLE2

| Rated Voltage $U_R$ (V) | Derated Voltage $U_C$ (V) | Case Code | Cap $C_R$ ( $\mu\text{F}$ ) | tg $\delta$ (%) 25°C | Rated Voltage $U_R$ (V) | Derated Voltage $U_C$ (V) | Case Code | Cap $C_R$ ( $\mu\text{F}$ ) | tg $\delta$ (%) 25°C |
|-------------------------|---------------------------|-----------|-----------------------------|----------------------|-------------------------|---------------------------|-----------|-----------------------------|----------------------|
| 6.3 0J                  | 3                         | 1         | 22                          | 45                   | 40                      | 20                        | 1         | 4.8                         | 15                   |
|                         |                           | 1         | 33                          | 45                   |                         |                           | 1         | 6.8                         | 20                   |
|                         |                           | 1         | 47                          | 45                   |                         |                           | 1         | 10                          | 20                   |
|                         |                           | 1         | 68                          | 45                   |                         |                           | 1         | 15                          | 25                   |
|                         |                           | 2         | 100                         | 50                   |                         |                           | 1         | 22                          | 30                   |
|                         |                           | 2         | 150                         | 50                   |                         |                           | 2         | 33                          | 30                   |
|                         |                           | 3         | 220                         | 70                   |                         |                           | 2         | 47                          | 35                   |
|                         |                           | 3         | 330                         | 75                   |                         |                           | 2         | 68                          | 30                   |
|                         |                           | 4         | 470                         | 95                   |                         |                           | 3         | 100                         | 45                   |
|                         |                           | 4         | 680                         | 95                   |                         |                           | 4         | 150                         | 45                   |
| 10 1A                   | 5                         | 5         | 1000                        | 100                  | 50                      | 25                        | 5         | 220                         | 45                   |
|                         |                           | 1         | 15                          | 40                   |                         |                           | 1         | 3.3                         | 10                   |
|                         |                           | 1         | 22                          | 40                   |                         |                           | 1         | 4.7                         | 15                   |
|                         |                           | 1         | 33                          | 40                   |                         |                           | 1         | 6.8                         | 15                   |
|                         |                           | 1         | 47                          | 45                   |                         |                           | 1         | 10                          | 15                   |
|                         |                           | 1         | 68                          | 45                   |                         |                           | 2         | 15                          | 15                   |
|                         |                           | 2         | 100                         | 50                   |                         |                           | 2         | 22                          | 20                   |
|                         |                           | 2         | 150                         | 60                   |                         |                           | 2         | 33                          | 25                   |
|                         |                           | 3         | 220                         | 65                   |                         |                           | 3         | 47                          | 25                   |
|                         |                           | 3         | 330                         | 80                   |                         |                           | 4         | 68                          | 35                   |
|                         |                           | 4         | 470                         | 85                   |                         |                           | 4         | 100                         | 35                   |
|                         |                           | 4         | 680                         | 85                   |                         |                           | 5         | 150                         | 30                   |

## PART NUMBER EXAMPLE:

|      |     |   |    |                                                                                                    |
|------|-----|---|----|----------------------------------------------------------------------------------------------------|
| CBGT | 686 | K | 1A | 4                                                                                                  |
|      |     |   |    | Case Code                                                                                          |
|      |     |   |    | Voltage                                                                                            |
|      |     |   |    | Tolerance M=20% K=10% J=5%                                                                         |
|      |     |   |    | Capacitance 105=1 $\mu\text{F}$ 106=10 $\mu\text{F}$ 107=100 $\mu\text{F}$ 108=1,000 $\mu\text{F}$ |
|      |     |   |    | Series                                                                                             |

TABLE2

| Rated Voltage $U_R$ (V) | Derated Voltage $U_C$ (V) | Case Code | Cap $C_R$ ( $\mu\text{F}$ ) | tg $\delta$ (%) 25°C | Rated Voltage $U_R$ (V) | Derated Voltage $U_C$ (V) | Case Code | Cap $C_R$ ( $\mu\text{F}$ ) | tg $\delta$ (%) 25°C |
|-------------------------|---------------------------|-----------|-----------------------------|----------------------|-------------------------|---------------------------|-----------|-----------------------------|----------------------|
| 16 1C                   | 8                         | 1         | 10                          | 30                   | 63                      | 32                        | 1         | 3.3                         | 10                   |
|                         |                           | 1         | 15                          | 30                   |                         |                           | 1         | 4.7                         | 15                   |
|                         |                           | 1         | 22                          | 35                   |                         |                           | 1         | 6.8                         | 15                   |
|                         |                           | 1         | 33                          | 35                   |                         |                           | 1         | 10                          | 15                   |
|                         |                           | 1         | 47                          | 40                   |                         |                           | 2         | 15                          | 15                   |
|                         |                           | 2         | 68                          | 40                   |                         |                           | 2         | 22                          | 20                   |
|                         |                           | 2         | 100                         | 45                   |                         |                           | 3         | 33                          | 25                   |
|                         |                           | 3         | 150                         | 45                   |                         |                           | 3         | 47                          | 25                   |
|                         |                           | 3         | 220                         | 70                   |                         |                           | 4         | 68                          | 35                   |
|                         |                           | 4         | 330                         | 80                   |                         |                           | 5         | 100                         | 35                   |
| 25 1E                   | 13                        | 4         | 470                         | 85                   | 75                      | 37                        | 6         | 150                         | 30                   |
|                         |                           | 1         | 6.8                         | 20                   |                         |                           | 1         | 3.3                         | 10                   |
|                         |                           | 1         | 10                          | 20                   |                         |                           | 1         | 4.7                         | 10                   |
|                         |                           | 1         | 15                          | 20                   |                         |                           | 1         | 6.8                         | 15                   |
|                         |                           | 1         | 22                          | 25                   |                         |                           | 2         | 10                          | 20                   |
|                         |                           | 1         | 33                          | 25                   |                         |                           | 2         | 15                          | 25                   |
|                         |                           | 2         | 47                          | 30                   |                         |                           | 3         | 22                          | 35                   |
|                         |                           | 2         | 68                          | 30                   |                         |                           | 3         | 33                          | 35                   |
|                         |                           | 2         | 100                         | 40                   |                         |                           | 4         | 47                          | 33                   |
|                         |                           | 3         | 150                         | 45                   |                         |                           | 5         | 68                          | 30                   |
| 100 2A                  | 50                        | 4         | 220                         | 60                   | 125                     | 63                        | 6         | 120                         | 30                   |
|                         |                           | 4         | 330                         | 60                   |                         |                           |           |                             |                      |
|                         |                           | 1         | 3.3                         | 10                   |                         |                           | 2         | 2.2                         | 10                   |
|                         |                           | 2         | 4.7                         | 10                   |                         |                           | 2         | 3.3                         | 10                   |
|                         |                           | 2         | 6.8                         | 15                   |                         |                           | 3         | 4.7                         | 15                   |
|                         |                           | 3         | 10                          | 20                   |                         |                           | 3         | 6.8                         | 25                   |
|                         |                           | 3         | 15                          | 25                   |                         |                           | 3         | 10                          | 25                   |
|                         |                           | 4         | 22                          | 35                   |                         |                           | 4         | 15                          | 30                   |
|                         |                           | 5         | 33                          | 35                   |                         |                           | 5         | 22                          | 35                   |
|                         |                           | 6         | 47                          | 33                   |                         |                           | 6         | 33                          | 30                   |
|                         |                           | 7         | 68                          | 30                   |                         |                           | 7         | 47                          | 35                   |