

- CBEA:**
- Tantalum case, Hermetically Sealed, Cylindrical, Radial-lead, Heteropolarity
  - Commingled by Electrolytic Tantalum Capacitor and Electrochemical Capacitor, Small size, Super Capacitance.
  - Stable in Electrical Performances, High Reliability, Long life-span, Maximum in the Density of Capacitance and Energy
  - Built-in as battery in Energy-converted-circuit & Power-pulsed-circuit, functioned as filtering, storage energy, time-delay circuit.



## SPECIFICATIONS

|                       |                                                          |
|-----------------------|----------------------------------------------------------|
| Operating Temperature | -55°C to +125°C (to +125°C, with rated voltage derating) |
| Storage Temperature   | -62°C ~ +130°C                                           |
| Capacitance Tolerance | Q: (-10%~+30%), K: (±10%), M: (±20%)                     |



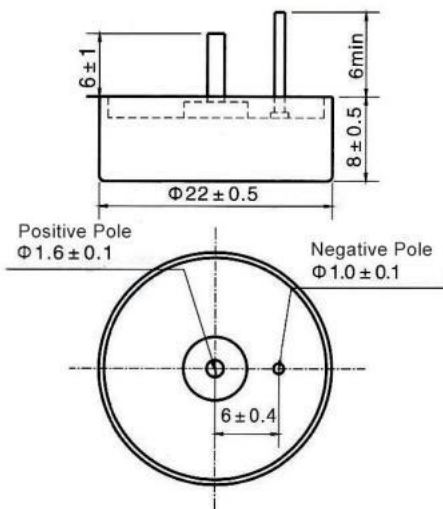
◆ Table 1: Electrical Characteristics and Size : 22x8 (Fig. 1)

| Rated Voltage (V) | Category Voltage (V) | Surge Voltage (V) | Cap. (µF) | tgδ (%) | ESR (Ω) 1kHz | DCL (µA) |             | Impedance at (Ω) 100Hz) | Capacitance Change at (%) |      | Dimensions D×H (mm) |
|-------------------|----------------------|-------------------|-----------|---------|--------------|----------|-------------|-------------------------|---------------------------|------|---------------------|
|                   |                      |                   |           |         |              | 25°C     | 85°C, 125°C |                         | -55°C                     | 85°C |                     |
| 10 1A             | 6                    | 11                | 8000      | 80      | 0.3          | 100      | 600         | 8                       | -80                       | +160 | 22x8                |
| 16 1C             | 9.5                  | 17.6              | 7000      | 70      | 0.3          | 125      | 750         | 8                       | -80                       | +160 | 22x8                |
| 25 1E             | 15                   | 27.5              | 5000      | 60      | 0.3          | 150      | 900         | 8                       | -75                       | +150 | 22x8                |
| 35 1V             | 20                   | 38.5              | 3500      | 50      | 0.3          | 150      | 900         | 8                       | -70                       | +140 | 22x8                |
| 50 1V             | 30                   | 55                | 2500      | 46      | 0.3          | 155      | 930         | 9.6                     | -60                       | +120 | 22x8                |
| 63 1J             | 38                   | 70                | 1200      | 35      | 0.4          | 85       | 510         | 11.2                    | -50                       | +80  | 22x8                |
| 80 1K             | 48                   | 88                | 860       | 30      | 0.4          | 90       | 540         | 12.8                    | -40                       | +80  | 22x8                |
| 100 2A            | 60                   | 110               | 400       | 25      | 0.5          | 25       | 150         | 14.4                    | -30                       | +60  | 22x8                |
| 110 2F            | 66                   | 121               | 200       | 20      | 0.5          | 25       | 150         | 16                      | -25                       | +50  | 22x8                |
| 125 2Q            | 75                   | 138               | 160       | 20      | 0.6          | 25       | 150         | 19.2                    | -20                       | +50  | 22x8                |

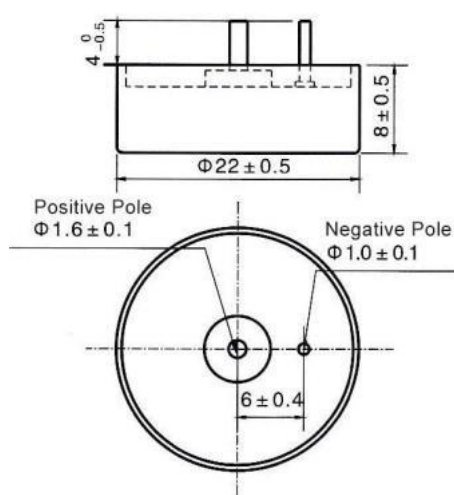
Dimensions (unit: mm)

Fig. 1

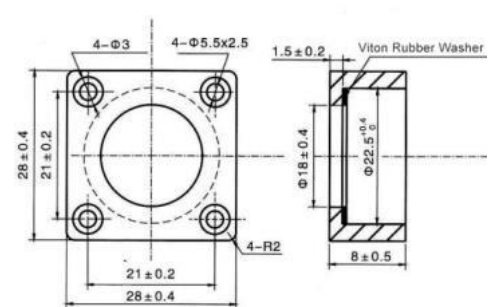
Φ22x8 Layout (A Type)



Φ22x8 Layout (B Type)

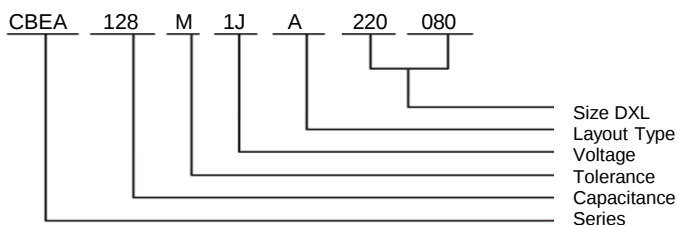


Φ22x8 Mounting bracket



Please visit our website to get more update data, those data & specification are subject to change without notice.

### PART NUMBER EXAMPLE



◆ Table 2: Electrical Characteristics and Size : 22x12.5 (Fig. 2)

| Rated Voltage (V) | Category Voltage (V) | Surge Voltage (V) | Cap. (μF) | tgδ (%) | ESR (Ω) 1kHz | DCL (μA) |             | Impedance at (Ω) 100Hz) | Capacitance Change at (%) |      | Dimensions |
|-------------------|----------------------|-------------------|-----------|---------|--------------|----------|-------------|-------------------------|---------------------------|------|------------|
|                   |                      |                   |           |         |              | 25°C     | 85°C, 125°C |                         | -55°C                     | 85°C | DxH (mm)   |
| 10                | 6                    | 11                | 20000     | 90      | 0.1          | 150      | 900         | 2.5                     | -80                       | +160 | 22x12.5    |
| 16                | 9.5                  | 17.6              | 18000     | 80      | 0.1          | 150      | 900         | 2.5                     | -80                       | +160 | 22x12.5    |
| 25                | 15                   | 27.5              | 13000     | 70      | 0.1          | 150      | 900         | 2.5                     | -75                       | +150 | 22x12.5    |
| 35                | 20                   | 38.5              | 9000      | 60      | 0.1          | 170      | 1000        | 2.5                     | -70                       | +140 | 22x12.5    |
| 50                | 30                   | 55                | 6800      | 65      | 0.1          | 170      | 1000        | 1.2                     | -45                       | +120 | 22x12.5    |
| 63                | 38                   | 70                | 2800      | 55      | 0.2          | 170      | 1000        | 3.5                     | -50                       | +80  | 22x12.5    |
| 80                | 48                   | 88                | 2000      | 45      | 0.2          | 200      | 1200        | 3.5                     | -40                       | +80  | 22x12.5    |
| 100               | 60                   | 110               | 1000      | 40      | 0.2          | 200      | 1200        | 4.0                     | -30                       | +60  | 22x12.5    |
| 110               | 66                   | 121               | 800       | 30      | 0.2          | 200      | 1200        | 4.0                     | -25                       | +50  | 22x12.5    |
| 125               | 75                   | 138               | 600       | 30      | 0.3          | 200      | 1200        | 4.0                     | -20                       | +50  | 22x12.5    |

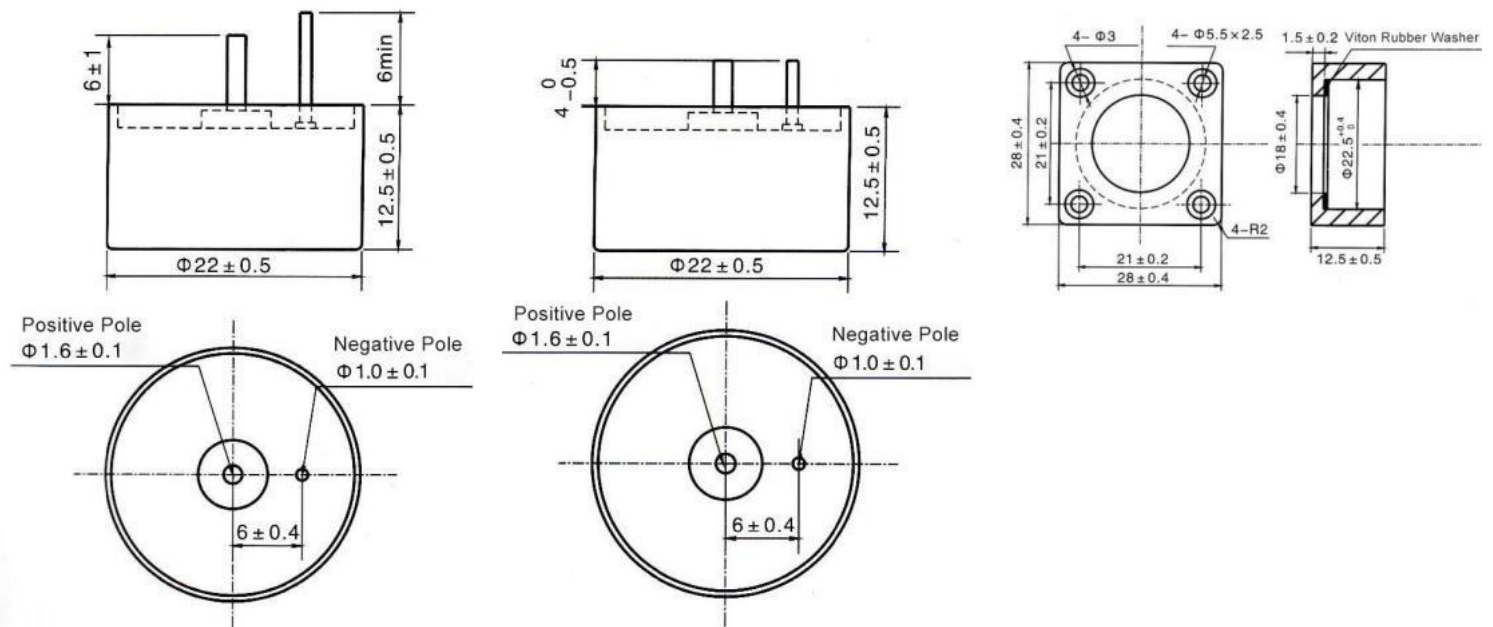
Dimensions (unit: mm)

Fig. 2

Φ22x12.5 Layout (A Type)

Φ22x12.5 Layout (B Type)

Φ22x12.5 Mounting bracket

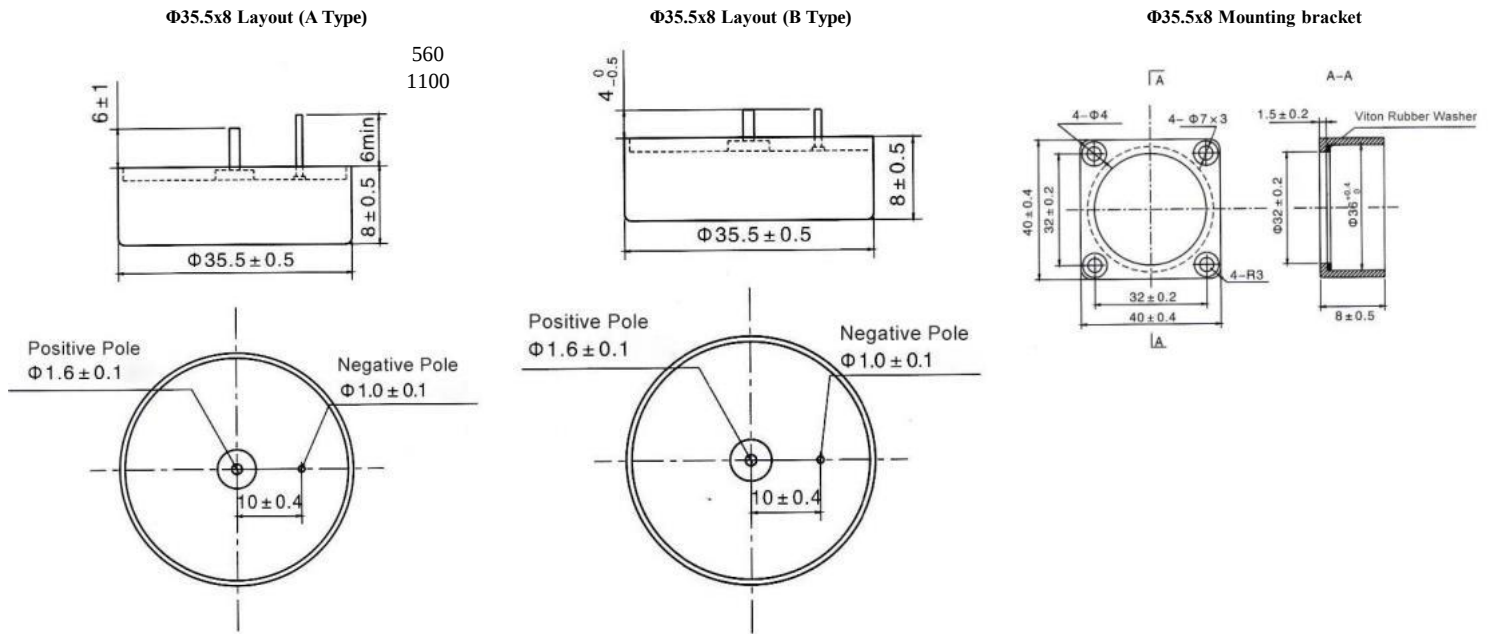


◆ Table 3: Electrical Characteristics and Size : 35.5x8 (Fig. 3)

| Rated Voltage (V) | Category Voltage (V) | Surge Voltage (V) | Cap. (μF)    | tgδ (%)  | ESR (Ω) 1kHz   | DCL (μA)   |              | Impedance at (Ω) 100Hz) | Capacitance Change at (%) |            | Dimensions |
|-------------------|----------------------|-------------------|--------------|----------|----------------|------------|--------------|-------------------------|---------------------------|------------|------------|
|                   |                      |                   |              |          |                | 25°C       | 85°C, 125°C  |                         | -55°C                     | 85°C       | DxH (mm)   |
| 10                | 6                    | 11                | 50000        | 180      | 0.05           | 150        | 900          | 1                       | -75                       | +140       | 35.5x8     |
| 16                | 9.5                  | 17.6              | 30000        | 160      | 0.05           | 150        | 900          | 1                       | -70                       | +140       | 35.5x8     |
| 25                | 15                   | 27.5              | 18000        | 120      | 0.05           | 150        | 900          | 1                       | -65                       | +120       | 35.5x8     |
| 35                | 20                   | 38.5              | 12000        | 90       | 0.065          | 150        | 900          | 1                       | -50                       | +120       | 35.5x8     |
| 50                | 30                   | 55                | 8000<br>9000 | 65       | 0.07           | 170        | 1000         | 1.2                     | -40<br>-45                | +120       | 35.5x8     |
| 63                | 38                   | 70                | 1800<br>4000 | 40<br>45 | 0.200<br>0.100 | 126<br>170 | 1000         | 1.4                     | -20<br>-30                | +60<br>+80 | 35.5x8     |
| 80                | 48                   | 88                | 1600<br>2800 | 20<br>40 | 0.15<br>0.1    | 100<br>200 | 1000<br>1200 | 1.6                     | -20<br>-30                | +60<br>+80 | 35.5x8     |
| 100               | 60                   | 110               | 1200<br>1900 | 35       | 0.125          | 200        | 1200         | 1.8                     | -25                       | +60        | 35.5x8     |
| 110               | 66                   | 121               | 580<br>1500  | 35       | 0.200          | 200        | 1200         | 2                       | -20                       | +50        | 35.5x8     |
| 125               | 75                   | 138               |              | 35       | 0.200          | 200        | 1200         | 2.4                     | -15                       | +50        | 35.5x8     |

Dimensions (unit: mm)

Fig. 3



Note:

1. Please do not use multimeter through the measuring procedures (may cause irreversible damage and lead to discard).
2. Capacitance and DF measured at 100Hz,  $U_- = 2.20^{+0.10}_{-0.10}V$ ,  $U_- = 1.0^{+0.5}_{-0.5}V$  Test only applied in series equivalent circuit.
3. Voltage derating is applied at +125°C. (The DCL parameter should be read after 5 minutes when it connected to the circuit).
4. Special size and demand could consult with us.