

Lead Type Disc Medium And High Voltage Ceramic Capacitors-HV Series (500VDC-6.3KVDC) Data Sheet

Feature

- Wide capacitance range from 100pF to 100000pF.
- Operating Temperature: $-25^{\circ}\text{C} \sim 85^{\circ}\text{C}$.
- Storage Temperature: $15^{\circ}\text{C} \sim 35^{\circ}\text{C}$.
- The high voltage disc ceramic capacitors have feature of withstanding higher voltage.

Applications

- These capacitors are used in bypass and coupling circuit, and those capacitors with low dissipation factor are particularly suitable to be used in circuits such as line scanning in Tvset

Part Number Code

| | | | | | | | | | | | | | |
|---|----|---|---|---|-----|---|----|---|---|---|---|---|---|
| N | 07 | F | 1 | B | 472 | M | N0 | B | 0 | S | 0 | N | 0 |
|---|----|---|---|---|-----|---|----|---|---|---|---|---|---|

Rated Voltage
 L: 500VDC
 N: 1KVDC
 R: 2KVDC
 S: 3KVDC
 T: 4KVDC
 W: 5KVDC
 A: 6KVDC

Pitch
 A:2.5mm
 B:5.0mm
 E:7.5mm
 D:10.0mm

Tolerance
 C:±0.25pF
 J:±5%
 :K:±10%
 M:±20%

Package
 B: Bulk
 T:Tape

Inner Management

Nominal capacitance
 10:100pF
 100:101pF
 222:2200pF
 103:10000pF

Environmental Standard
 0:RoHS
 2:RoHS+Halogen-Free

Foot Type
 1:Long straight
 2:Outside Crimped
 3:Short Straight
 4:Inner Crimped
 8:Vertical Crimped

Core Diameter
 04: 4.0mm
 05: 5.0mm
 16: 16.0mm
 C0: 5.0mm
 C4: 5.4mm
 C6: 5.6mm

Lead Length
 S0~S9:1.0~1.9mm
 X0~X9:2.0~2.9mm
 A0~A9:3.0~3.9mm
 B0~B9:4.0~4.9mm
 C0~C9:5.0~5.9mm
 D0~D9:6.0~6.9mm
 E0~E9:7.0~7.9mm

Lead Length
 F0~F9:8.0~8.9mm
 G0~G9:9.0~9.9mm
 H0~H9:10.0~10.9mm
 J0~J9:11.0~11.9mm
 K0~K9:12.0~12.9mm
 L0~L9:13.0~13.9mm
 M0~M9:14.0~14.9mm

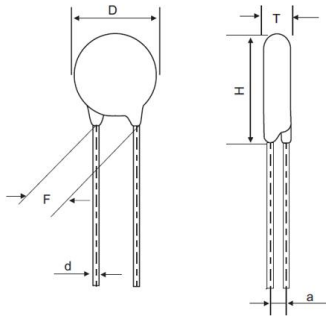
Lead Length
 M0~M9:14.0~14.9mm
 N0:16~27.0mm(Bulk)
Crimped Lead Taped
 N0:H0=16.5mm
 P0:H0=17.0mm
 Q0:H0=19.0mm
Straight Lead
 Q0:20.0mm

Temperature Characteristic
 A:NP0 S:SL
 B:Y5P E:Y5U
 F:Y5V

Specifications

| | |
|---|---|
| Capacitance and Dissipation factor testing condition | SL/NP0:25℃、1±0.1MHz、1.0Vrms Y5P/Y5U/Y5V:25℃、1±0.1MHz、1.0Vrms |
| Dissipation Factor(tanδ) | SL/NP0:≤0.15% Y5P/Y5U/Y5V:≤2.5% |
| Rated Voltage | 500VDC、1000VDC、2000VDC、3000VDC、4000VDC、5000VDC、6000VDC |
| Withstand Voltage | 1.5U _R +500V(DC) |
| Insulation Resistance (I.R.) | SL/NP0:IR≥10000MΩ;Y5P/Y5U/Y5V:IR≥4000MΩ |
| Temperature Characteristic | SL、NP0、Y5P、Y5U、Y5V |

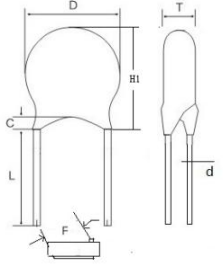
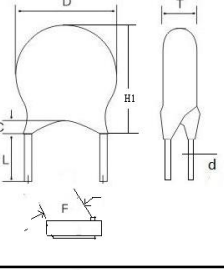
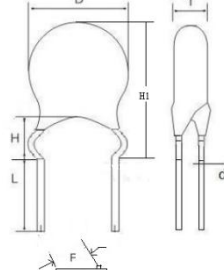
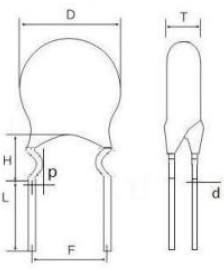
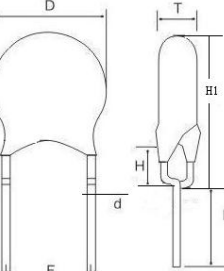
Dimensions (mm)



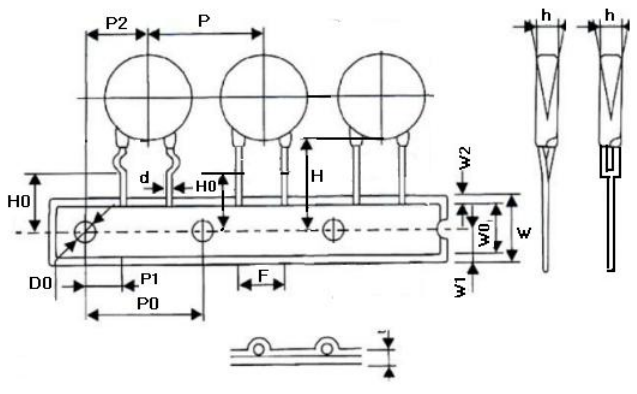
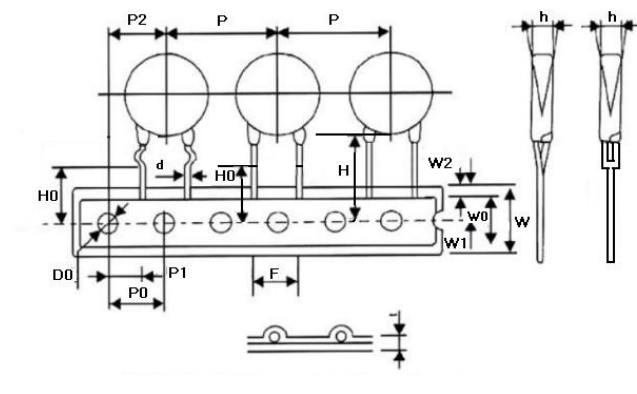
| Rated Voltage (VDC) | Temperature Coefficient Group | | | | | Dimension (mm) | | Lead Size (mm) | | |
|--------------------------|-------------------------------|-----------|-------------|-------------|--------|----------------|---------|----------------|----------|------|
| | Y5P (B) | Y5U (E) | Y5V (F) | SL | NP0 | D±1 | T±1 | F | d±0.05 | |
| Nominal Capacitance (pF) | | | | | | | | | | |
| 500 | 150-1500 | 2200 | 3300-4700 | 20-100 | 0.5-22 | 5.5 | 2.0 | 5.0±0.8 | 0.5 | |
| | / | 3300-4700 | 6800 | / | / | 6.5 | | | | |
| | 2200 | / | 10000 | / | / | 7.5 | | | | |
| | | 3300 | 10000 | / | / | 9.5 | 2.5 | 7.5±0.8 | 0.6 | |
| | | 4700 | / | 20000-22000 | / | / | | | | 10.5 |
| | | 10000 | / | / | / | / | 14.5 | 2.5 | 7.5±0.8 | 0.6 |
| | | / | / | 47000 | / | / | 14.5 | | | |
| | | / | / | 100000 | / | / | 20.0 | 3.0 | 10.0±0.8 | 0.7 |
| 1000 | / | / | / | 20-100 | 0.5-22 | 5.5 | 2.0 | 5.0±0.8 | 0.5 | |
| | 100-820 | / | / | / | / | 5.5 | | | | |
| | 1000 | / | / | / | / | 6.0 | | | | |
| | | / | 1500-3300 | 4700 | / | / | 6.5 | 2.5 | 5.0±0.8 | 0.5 |
| | | 1500-1800 | 4700 | / | / | / | 7.5 | | | |
| | | 2200-2700 | / | 10000 | / | / | 8.5 | | | |
| | | / | 6800 | 15000 | / | / | 9.5 | | | |
| | | 3300 | 10000 | / | / | / | 10.5 | | | |
| | | 4700 | / | / | / | / | 12.0 | | | |
| | | / | / | 20000-22000 | / | / | 13.0 | | | |
| | | / | / | 33000 | / | / | 15.0 | 7.5±0.8 | 0.6 | |
| | | / | / | 47000 | / | / | 17.0 | | | |
| | | 10000 | / | / | / | / | 17.5 | 3.0 | 10.0±0.8 | 0.7 |
| | | / | / | 100000 | / | / | 22.5 | | | |
| 2000 | 100-470 | 1000 | 1500-2200 | / | / | 6.0 | 2.5/3.0 | 5.0±0.8 | 0.5 | |
| | / | / | / | 10-120 | 0.5-10 | 6.5 | | | | |
| | 680-820 | / | 3300 | / | / | 7.0 | | | | |
| | | 1000 | 2200 | 4700 | / | / | 8.0 | 3.0 | 7.5±0.8 | 0.6 |
| | | 1500 | 4700 | 6800 | / | / | 10.0 | | | |
| | | 2200 | / | 10000 | / | / | 11.0 | | | |
| | | 2700 | / | / | / | / | 12.0 | | | |
| | | 3300 | / | / | / | / | 13.0 | | | |
| | 4700 | 10000 | 20000-22000 | / | / | 14.5 | | | | |

| Rated Voltage (VDC) | Temperature Coefficient Group | | | | | Dimension (mm) | | Lead Size (mm) | | |
|---------------------|-------------------------------|----------|-----------|-------------|-----|----------------|---------|----------------|--------------|-----|
| | Y5P(B) | Y5U(E) | Y5V(F) | SL | NPO | D±1 | T±1 | F | d±0.05 | |
| | Nominal Capacitance (pF) | | | | | | | | | |
| 3000 | 100-470 | 1000 | 1000-1500 | 10-39 | / | 6.0 | 3.5 | 7.5±0.8 | 0.6 | |
| | 270-680 | / | 2200 | 47-56 | / | 7.0 | | | | |
| | / | 1500 | 3300 | 68-82 | / | 8.0 | | | | |
| | | 1000 | 2200 | 4700 | / | / | | 9.0 | 10.0 ±0.8 | 0.7 |
| | | / | 3300 | / | / | / | | 10.5 | | |
| | | / | 4700 | / | / | / | | 13.0 | | |
| | | / | / | 10000 | / | / | | 13.5 | | |
| | | / | 10000 | / | / | / | | 17.5 | | |
| | | / | / | 20000-22000 | / | / | | 20.5 | | |
| 4000 | 100-470 | 1000 | 1500 | 10-39 | / | 6.0 | 3.5 | 7.5±0.8 | 0.6 | |
| | 270-680 | / | 2200 | 47-56 | / | 7.0 | | | | |
| | / | 1500 | 3300 | 68-82 | / | 8.0 | | | | |
| | | 1000 | 2200 | 4700 | / | / | | 9.0 | 10.0 ±0.8 | 0.7 |
| | | / | 3300 | / | / | / | | 10.5 | | |
| | | / | 4700 | / | / | / | | 13.0 | | |
| | | / | / | 10000 | / | / | | 13.5 | | |
| | | / | 10000 | / | / | / | | 17.5 | | |
| | | / | / | 20000-22000 | / | / | | 20.5 | | |
| 5000 | 100-220 | 330-470 | 1000 | / | / | 6.0 | 3.5/4.5 | 10.0 ±0.8 | 0.6/0.7 | |
| | 330 | 560-1000 | 1500 | / | / | 7.0 | 4.5 | | | |
| | 470 | / | 2200 | / | / | 8.0 | | | | |
| | 560-680 | 1500 | / | / | / | 9.0 | | | | |
| | / | 2200 | 3300 | / | / | 10.0 | | | | |
| | 1000 | / | 4700 | / | / | 11.0 | | | | |
| | / | 3300 | / | / | / | 13.5 | | | | |
| | / | 4700 | / | / | / | 16.5 | | | | |
| 6000 | 100-220 | 330-470 | 1000 | / | / | 6.0 | 3.5/4.5 | 10.0 ±0.8 | 0.6/0.7 | |
| | 330 | 560-1000 | 1500 | / | / | 7.0 | 4.5 | | | |
| | 470 | / | 2200 | / | / | 8.0 | | | | |
| | 560-680 | 1500 | / | / | / | 9.0 | | | | |
| | / | 2200 | 3300 | / | / | 10.0 | | | | |
| | 1000 | / | 4700 | / | / | 11.0 | | | | |
| | / | 3300 | / | / | / | 13.5 | | | | |
| | / | 4700 | / | / | / | 16.5 | | | | |

Lead Configuration

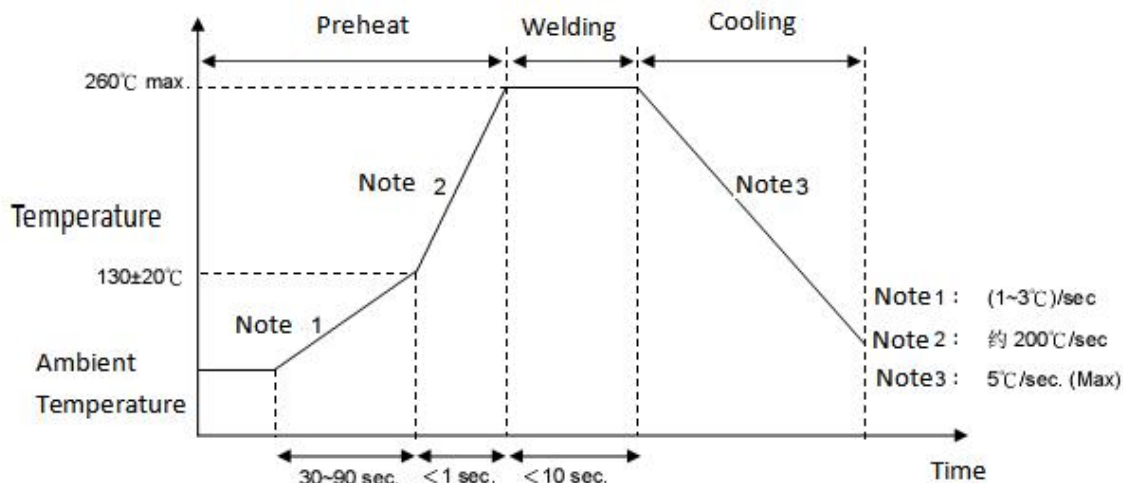
| Lead Style | Drawing | Lead Length L (mm) | Coating Lead Length C (mm) |
|------------------|---|--|--|
| Long Straight |  | 16.0 min | ① C ≤ 2.5mm (Product diameter < 12mm) ② C ≤ 3.0mm (Product diameter ≥ 12mm) |
| Short Straight |  | ① [2.5 ≤ L < 6.0] ± 0.5; ② [6.0 ≤ L ≤ 10] ± 1.0 | ① C ≤ 2.5mm (Product diameter < 12mm) ② C ≤ 3.0mm (Product diameter ≥ 12mm) |
| Outside Crimped |  | ① [2.5 ≤ L < 6.0] ± 0.5; ② [6.0 ≤ L ≤ 10] ± 1.0 | Not exceed the bend point |
| Inner Crimped |  | ① [2.5 ≤ L < 6.0] ± 0.5; ② [6.0 ≤ L ≤ 10] ± 1.0 | Not exceed the bend point |
| Vertical Crimped |  | ① [2.5 ≤ L < 6.0] ± 0.5; ② [6.0 ≤ L ≤ 10] ± 1.0 | Not exceed the bend point |

Taping And Dimensions (mm)

| Figure | Fig.1 | | Fig.2 | | | |
|--|--------|-----------------------------|-----------------------------|-----------------------------|----------|----------|
| | Symbol | P=5.0 | P=7.5 | | P=10.0 | |
|  | Po | 12.7±0.3 | 12.7±0.3 | 12.7±0.3 | | |
| | P | 12.7±1.0 | 25.4±1.0 | 25.4±1.0 | | |
| | P1 | 3.85±0.7 | 8.95±0.7 | 7.7±0.7 | | |
| | P2 | 6.35±1.3 | 12.7±1.3 | 12.7±1.3 | | |
| | F | 5±0.8 | 7.5±0.8 | 10.0±0.8 | | |
| | Δh | 0±2.0 | 0±2.0 | 0±2.0 | | |
| | W | 18.0+1.5/-1.0 | 18.0 +1.5/-1.0 | 18.0 +1.5/-1.0 | | |
| | Wo | 10.5 Max | 10.5 Max | 10.5 Max | | |
| | W1 | 9.0+0.75/-0.5 | 9.0+0.75/-0.5 | 9.0+0.75/-0.5 | | |
| | W2 | 3.0 Max | 3.0 Max | 3.0 Max | | |
|  | Do | 4.0±0.2 | 4.0±0.2 | 4.0±0.2 | | |
| | H | 20+1.5/-1.0 | 20+1.5/-1.0 | 20+1.5/-1.0 | | |
| | Ho | 16.5&17.0&19.0 +1.5/-1.0 | 16.5&17.0&19.0 +1.5/-1.0 | 16.5&17.0&19.0 +1.5/-1.0 | | |
| | L | Straight Lead | 11.0 Max | Crimped Lead | 9.0 Max | 11.0 Max |
| | | Crimped Lead | 9.0 Max | Straight Lead | 11.0 Max | 9.0 Max |
| | t1 | 0.5±0.2 | 0.5±0.2 | 0.5±0.2 | | |
| | t2 | 1.7 Max | 1.7 Max | 1.7 Max | | |

Soldering Condition

Wave Soldering Graph



Note: Film capacitor is not suitable for reflow soldering welding, because it will cause thermal contraction and affect electrical performance.

Iron Soldering Condition

| Item | Condition |
|--|----------------------------|
| Temperature of soldering copper bit | 360°C (max.) |
| Soldering duration | 3sec (max.) |
| Space between soldering position and coating layer | 2mm (min.) |