

# Lead Type Disc 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

### Core Diameter

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

### Foot Type

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

### 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

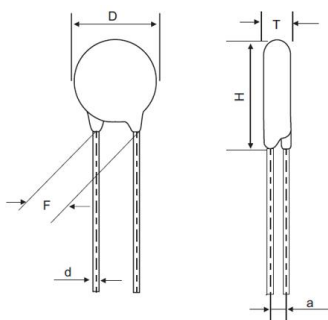
### Temperature Characteristic

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

## Dimensions (mm)

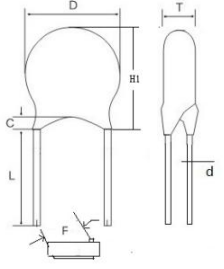
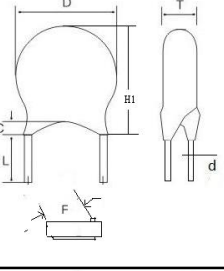
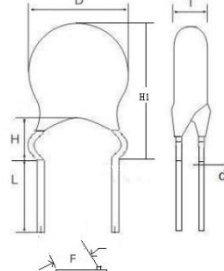
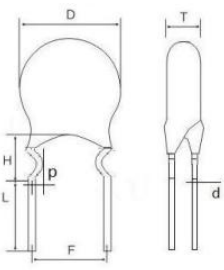
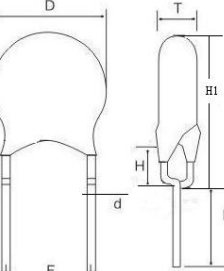


| Rated Voltage (VDC) | Temperature Coefficient Group |           |             |        |        | Dimension (mm) |         | Lead Size (mm) |         |
|---------------------|-------------------------------|-----------|-------------|--------|--------|----------------|---------|----------------|---------|
|                     | Y5P (B)                       | Y5U (E)   | Y5V (F)     | SL     | NP0    | D±1            | T±1     | F              | d±0.05  |
|                     | Nominal Capacitance (pF)      |           |             |        |        |                |         |                |         |
| 500                 | 100-1500                      | 1500-2200 | 3300-4700   | 20-150 | 0.5-22 | 5.5            | 2.0     | 5.0±0.8        | 0.5     |
|                     | /                             | 3300-4700 | 6800        | /      | /      | 6.5            |         |                |         |
|                     | 2200                          | 5600-6800 | 6800-10000  | /      | /      | 7.5            |         |                |         |
|                     | 3300                          | 10000     | /           | /      | /      | 9.5            |         |                |         |
|                     | 4700                          | /         | 20000-22000 | /      | /      | 10.5           | 2.5     | 7.5±0.8        | 0.6     |
|                     | 10000                         | /         | /           | /      | /      | 14.5           |         |                |         |
|                     | /                             | /         | 47000       | /      | /      | 17.0           |         |                |         |
|                     | /                             | /         | 100000      | /      | /      | 20.0           |         |                |         |
| 1000                | 100-820                       | /         | /           | 20-100 | 0.5-22 | 5.5            | 2.5     | 5.0±0.8        | 0.5     |
|                     | 1000                          | /         | /           | /      | /      | 6.0            |         |                |         |
|                     | /                             | 1500-3300 | 4700-6800   | /      | /      | 6.5            |         |                |         |
|                     | 1500-1800                     | 4700-5600 | /           | /      | /      | 7.5            |         |                |         |
|                     | 2200-2700                     | /         | 10000       | /      | /      | 8.5            |         |                |         |
|                     | /                             | 6800      | 15000       | /      | /      | 9.5            |         |                |         |
|                     | 3300                          | 10000     | /           | /      | /      | 10.5           |         | 7.5±0.8        | 0.6     |
|                     | 4700                          | /         | /           | /      | /      | 11.5           |         |                |         |
|                     | /                             | /         | 20000-22000 | /      | /      | 13.0           |         |                |         |
|                     | /                             | /         | 33000       | /      | /      | 15.0           |         | 10.0±0.8       | 0.6/0.7 |
|                     | 10000                         | /         | 47000       | /      | /      | 17.5           |         |                |         |
|                     | /                             | /         | 100000      | /      | /      | 22.5           |         |                |         |
|                     |                               |           |             |        |        |                |         |                |         |
| 2000                | 100-470                       | 1000      | 1500-2200   | /      | /      | 6.0            | 2.5/3.0 | 5.0±0.8        | 0.5     |
|                     | 560-820                       | /         | 3300        | 10-120 | 0.5-10 | 7.0            |         |                |         |
|                     | 1000                          | 2200      | 4700        | 68     | /      | 8.0            | 3.0     | 7.5±0.8        | 0.6     |
|                     | 1500                          | 4700      | 6800        | /      | /      | 10.0           |         |                |         |
|                     | 1800-2200                     | /         | 10000       | /      | /      | 11.0           |         |                |         |
|                     | 2700                          | /         | /           | /      | /      | 12.0           |         |                |         |
|                     | 3300                          | /         | /           | /      | /      | 13.0           |         |                |         |
|                     | 2200                          | /         | /           | /      | /      | 14.0           |         |                |         |
|                     | 4700                          | 10000     | 20000-22000 | /      | /      | 14.5           |         |                |         |

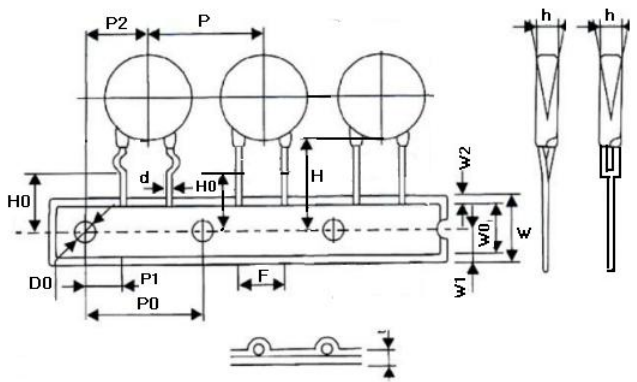
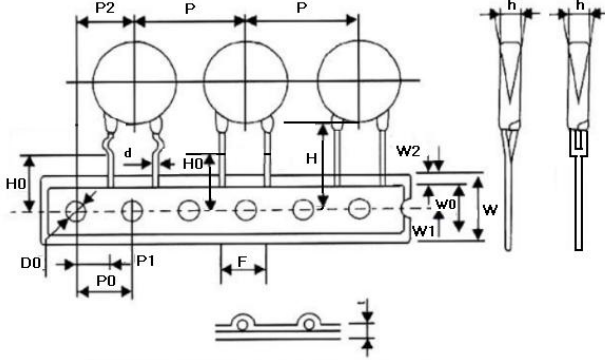
| Rated<br>Voltage<br>(VDC) | Temperature Coefficient Group |          |             |       |      | Dimension (mm) |         | Lead Size (mm) |         |
|---------------------------|-------------------------------|----------|-------------|-------|------|----------------|---------|----------------|---------|
|                           | Y5P(B)                        | Y5U(E)   | Y5V(F)      | SL    | NPO  | D±1            | T±1     | F              | d±0.05  |
|                           | Nominal Capacitance (pF)      |          |             |       |      |                |         |                |         |
| 3000                      | 100-470                       | 680-1000 | 1500        | 27-68 | 3-22 | 6.0            | 3.0/3.5 | 7.5±0.8        | 0.6     |
|                           | 270-680                       | /        | 2200        | /     | /    | 7.0            | 3.5     |                |         |
|                           | /                             | 1500     | 3300        | 82    | /    | 8.0            |         |                |         |
|                           | 1000                          | 2200     | 4700        | /     | /    | 9.0            |         |                |         |
|                           | /                             | 3300     | 6800-10000  | /     | /    | 11.0           |         | 10.0<br>±0.8   | 0.6/0.7 |
|                           | /                             | 4700     | 10000       | /     | /    | 13.0           |         |                |         |
|                           | /                             | 10000    | /           | /     | /    | 17.5           |         |                |         |
|                           | /                             | /        | 20000-22000 | /     | /    | 20.5           |         |                |         |
| 3150                      | 100-470                       | 1000     | 1500        | 10-39 | /    | 6.0            | 3.5     | 7.5±0.8        | 0.6     |
|                           | 680                           | /        | 2200        | 47-68 | /    | 7.0            |         |                |         |
|                           | /                             | 1500     | 3300        | 82    | /    | 8.0            |         |                |         |
|                           | 1000                          | 2200     | 4700        | /     | /    | 9.0            |         |                |         |
|                           | 1500                          | 3200     | /           | /     | /    | 11.0           |         | 10.0<br>±0.8   | 0.7     |
|                           | 2200                          | 4700     | /           | /     | /    | 13.0           |         |                |         |
|                           | /                             | /        | 10000       | /     | /    | 14.0           |         |                |         |
|                           | /                             | 10000    | /           | /     | /    | 17.5           |         |                |         |
| 4000                      | 100-470                       | 680-1000 | 1500        | 10-68 | 3-22 | 6.0            | 3.0/3.5 | 7.5±0.8        | 0.6     |
|                           | 270-680                       | /        | 2200        | /     | /    | 7.0            | 3.5     |                |         |
|                           | /                             | 1500     | 3300        | 82    | /    | 8.0            |         |                |         |
|                           | 1000                          | 2200     | 4700        | /     | /    | 9.0            |         |                |         |
|                           | /                             | 3300     | 6800-10000  | /     | /    | 11.0           |         | 10.0<br>±0.8   | 0.6/0.7 |
|                           | /                             | 4700     | 10000       | /     | /    | 13.0           |         |                |         |
|                           | /                             | 10000    | /           | /     | /    | 17.5           |         |                |         |
|                           | /                             | /        | 20000-22000 | /     | /    | 20.5           |         |                |         |
| 5000                      | 100-220                       | 330-470  | 1000        | 10-39 | /    | 6.0            | 3.5/4.5 | 10.0<br>±0.8   | 0.6/0.7 |
|                           | 330                           | 560-1000 | 1500        | 47-56 | /    | 7.0            | 4.5     |                |         |
|                           | 470                           | /        | 2200        | 68-82 | /    | 8.0            |         |                |         |
|                           | 560-680                       | 1500     | /           | /     | /    | 9.0            |         |                |         |
|                           | /                             | 2200     | 3300        | /     | /    | 10.0           |         |                |         |
|                           | 1000                          | /        | 4700        | /     | /    | 11.0           |         |                |         |
|                           | /                             | 3300     | /           | /     | /    | 13.5           |         |                |         |
|                           | /                             | 4700     | /           | /     | /    | 16.5           |         |                |         |

| Rated<br>Voltage<br>(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)      |          |        |       |     |                |         |                |         |
| 6000                      | 100-220                       | 330-470  | 1000   | 10-39 | /   | 6.0            | 3.5/4.5 | 10.0<br>±0.8   | 0.6/0.7 |
|                           | 330                           | 560-1000 | 1500   | 47-56 | /   | 7.0            | 4.5     |                |         |
|                           | 470                           | /        | 2200   | 68-82 | /   | 8.0            |         |                |         |
|                           | 560-680                       | 1500     | /      | /     | /   | 9.0            |         |                |         |
|                           | /                             | 2200     | 3300   | /     | /   | 10.0           |         |                |         |
|                           | 1000                          | /        | 4700   | /     | /   | 11.0           |         |                |         |
|                           | /                             | 3300     | /      | /     | /   | 13.5           |         |                |         |
|                           | /                             | 4700     | /      | /     | /   | 16.5           |         |                |         |
| 6300                      | 100-220                       | 1000     | /      | 10-39 | /   | 6.0            | 3.5/4.5 | 10.0<br>±0.8   | 0.6/0.7 |
|                           | 330                           | /        | /      | 47-68 | /   | 7.0            | 4.5     |                |         |
|                           | 470                           | /        | 2200   | 82    | /   | 8.0            |         |                |         |
|                           | 680                           | /        | /      | /     | /   | 9.0            |         |                |         |
|                           | 1000                          | 2200     | 3300   | /     | /   | 10.0           |         |                |         |
|                           | /                             | /        | 4700   | /     | /   | 11.0           |         |                |         |

## Lead Configuration

| Lead Style       | Drawing                                                                             | Lead Length<br>L (mm)                                                | Coating Lead Length<br>C (mm)                                                                                             |
|------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Long Straight    |    | 16.0 min                                                             | ① $C \leq 2.5\text{mm}$<br>(Product diameter < 12mm)<br>② $C \leq 3.0\text{mm}$<br>(Product diameter $\geq 12\text{mm}$ ) |
| Short Straight   |    | ① $[2.5 \leq L < 6.0] \pm 0.5$ ;<br>② $[6.0 \leq L \leq 10] \pm 1.0$ | ① $C \leq 2.5\text{mm}$<br>(Product diameter < 12mm)<br>② $C \leq 3.0\text{mm}$<br>(Product diameter $\geq 12\text{mm}$ ) |
| Outside Crimped  |   | ① $[2.5 \leq L < 6.0] \pm 0.5$ ;<br>② $[6.0 \leq L \leq 10] \pm 1.0$ | Not exceed the bend point                                                                                                 |
| Inner Crimped    |  | ① $[2.5 \leq L < 6.0] \pm 0.5$ ;<br>② $[6.0 \leq L \leq 10] \pm 1.0$ | Not exceed the bend point                                                                                                 |
| Vertical Crimped |  | ① $[2.5 \leq L < 6.0] \pm 0.5$ ;<br>② $[6.0 \leq L \leq 10] \pm 1.0$ | 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<br>+1.5/-1.0 | 16.5&17.0&19.0<br>+1.5/-1.0 |               | 16.5&17.0&19.0<br>+1.5/-1.0 |               |
|                                                                                    | L      | Straight Lead               | Crimped Lead                | Straight Lead | Crimped Lead                | Straight Lead |
|                                                                                    |        | 11.0 Max                    | 9.0 Max                     | 11.0 Max      | 9.0 Max                     | 11.0 Max      |
|                                                                                    | t1     | 0.5±0.2                     | 0.5±0.2                     |               | 0.5±0.2                     |               |
|                                                                                    | t2     | 1.7 Max                     | 1.7 Max                     |               | 1.7 Max                     |               |

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[47P](#) [CCK-4N7](#) [CCK-4P7](#) [CK45-B3FD681KYNNA](#)