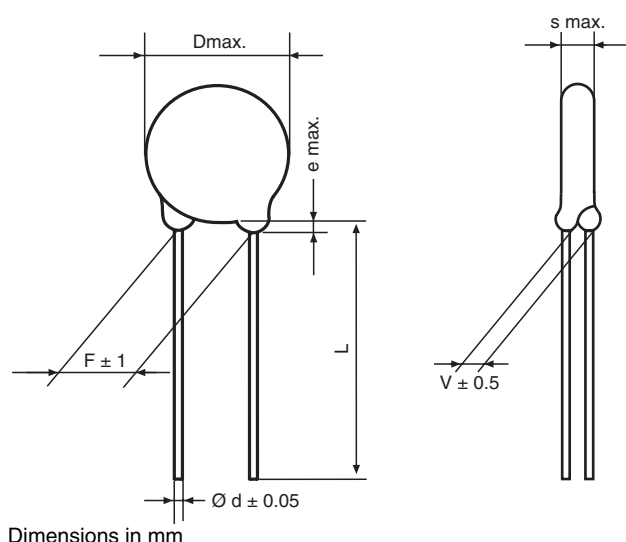


# Ceramic High Voltage Disc Capacitors, Class 1



Dimensions in mm

|           | COATING<br>EXTENSION e | BULK STANDARD<br>LEAD LENGTH L |
|-----------|------------------------|--------------------------------|
| ALL TYPES | 3 max.                 | 30.0 + 0 - 3<br>or<br>6.0 ± 1  |

## COATING:

Epoxy dipped, insulating,  
Flame retarding acc. to UL 94V-0

## TEMPERATURE CHARACTERISTIC OF CAPACITANCE:

See General Information

## LEAD CONFIGURATION & TAPING:

See General Information

## MARKING:

|                       |                      |
|-----------------------|----------------------|
| Capacitance value     | Clear text           |
| Capacitance tolerance | With letter code     |
| Rated voltage         | Clear text           |
| Ceramic Dielectric    | With letter code U   |
| Manufacturers logo    | Where D ≥ 13 mm only |

## DESIGN:

Disc capacitors with epoxy coating

## RATED VOLTAGE $U_R$ :

|     |                    |
|-----|--------------------|
| HAU | 1 kV <sub>DC</sub> |
| HBU | 2 kV <sub>DC</sub> |
| HCU | 3 kV <sub>DC</sub> |
| HDU | 4 kV <sub>DC</sub> |
| HEU | 5 kV <sub>DC</sub> |
| HFU | 6 kV <sub>DC</sub> |

## DIELECTRIC STRENGTH BETWEEN LEADS:

Component test

|     |                             |
|-----|-----------------------------|
| HAU | 1750 kV <sub>DC</sub> , 2 s |
| HBU | 3000 kV <sub>DC</sub> , 2 s |
| HCU | 5000 kV <sub>DC</sub> , 2 s |
| HDU | 6000 kV <sub>DC</sub> , 2 s |
| HEU | 7500 kV <sub>DC</sub> , 2 s |
| HFU | 9000 kV <sub>DC</sub> , 2 s |

## DISSIPATION FACTOR $\tan \delta$ :

$$C < 30 \text{ pF: } \left( \frac{100}{C} + 7 \right) \cdot 10^{-4}$$

$$C \geq 30 \text{ pF: } \leq 10 \cdot 10^{-4}$$

## INSULATION RESISTANCE $R_{IS}$ :

$$\geq 1 \cdot 10^{10} \Omega$$

## CATEGORY TEMPERATURE RANGE $\vartheta_A$ :

(- 40 to + 85) °C

## CLIMATIC CATEGORY ACC. TO EN 60068-1:

40 / 085 / 21



**RoHS**  
COMPLIANT

## ORDERING INFORMATION

| HAU   | 220                  | K         | BA               | CD0                   | K                | R                 |
|-------|----------------------|-----------|------------------|-----------------------|------------------|-------------------|
| MODEL | CAPACITANCE<br>VALUE | TOLERANCE | RATED<br>VOLTAGE | LEAD<br>CONFIGURATION | INTERNAL<br>CODE | RoHS<br>COMPLIANT |

**ORDERING INFORMATION, CERAMIC HIGH VOLTAGE DISC CAPACITORS, 1 KV (DC)**

| C<br>(pF)            | TOL.<br>(%) | D x s<br>(mm) | F ± 1 *<br>(mm) | d ± 0.05 *<br>(mm) | V ± 0.5 *<br>(mm) | CERAMIC<br>CODE | ORDERING CODE  |
|----------------------|-------------|---------------|-----------------|--------------------|-------------------|-----------------|----------------|
| <b>CLASS 1 N 750</b> |             |               |                 |                    |                   |                 |                |
| 10                   | ± 10 %      | 7.0 x 3.0     | 7.5             | 0.6                | 1.4               | U               | HAU100□BA□□□KR |
| 15                   |             | 7.0 x 3.0     |                 |                    |                   |                 | HAU150□BA□□□KR |
| 22                   |             | 7.0 x 3.0     |                 |                    |                   |                 | HAU220□BA□□□KR |
| 33                   |             | 8.0 x 3.0     |                 |                    |                   |                 | HAU330□BA□□□KR |
| 47                   |             | 8.0 x 3.0     |                 |                    |                   |                 | HAU470□BA□□□KR |
| 68                   |             | 8.0 x 3.0     |                 |                    |                   |                 | HAU680□BA□□□KR |
| 82                   |             | 8.0 x 3.0     |                 |                    |                   |                 | HAU820□BA□□□KR |
| 100                  |             | 8.0 x 3.0     |                 |                    |                   |                 | HAU101□BA□□□KR |
| 150                  |             | 10.0 x 3.5    |                 |                    |                   |                 | HAU151□BA□□□KR |
| 220                  |             | 11.0 x 3.5    |                 |                    |                   |                 | HAU221□BA□□□KR |
| 330                  |             | 12.5 x 3.5    |                 |                    |                   |                 | HAU331□BA□□□KR |
| 470                  |             | 14.5 x 3.5    |                 |                    |                   |                 | HAU471□BA□□□KR |
| 560                  |             | 16.5 x 3.5    |                 |                    |                   |                 | HAU561□BA□□□KR |
| 680                  |             | 16.5 x 3.5    |                 |                    |                   |                 | HAU681□BA□□□KR |

**ORDERING INFORMATION, CERAMIC HIGH VOLTAGE DISC CAPACITORS, 2 KV (DC)**

| C<br>(pF)     | TOL.<br>(%) | D x s<br>(mm) | F ± 1 *<br>(mm) | d ± 0.05 *<br>(mm) | V ± 0.5 *<br>(mm) | CERAMIC<br>CODE | ORDERING CODE  |
|---------------|-------------|---------------|-----------------|--------------------|-------------------|-----------------|----------------|
| CLASS 1 N 750 |             |               |                 |                    |                   |                 |                |
| 10            | ± 10 %      | 7.0 x 4.0     | 7.5             | 0.6                | 1.2               | U               | HBU100□BB□□□KR |
| 15            |             | 7.0 x 4.0     |                 |                    |                   |                 | HBU150□BB□□□KR |
| 22            |             | 7.0 x 4.0     |                 |                    |                   |                 | HBU220□BB□□□KR |
| 33            |             | 7.0 x 4.0     |                 |                    | 1.3               |                 | HBU330□BB□□□KR |
| 47            |             | 7.0 x 4.0     |                 |                    |                   |                 | HBU470□BB□□□KR |
| 68            |             | 8.0 x 4.0     |                 |                    |                   |                 | HBU680□BB□□□KR |
| 82            |             | 8.0 x 4.0     |                 |                    | 1.4               |                 | HBU820□BB□□□KR |
| 100           |             | 10.0 x 4.2    |                 |                    |                   |                 | HBU101□BB□□□KR |
| 150           |             | 10.0 x 4.2    |                 |                    |                   |                 | HBU151□BB□□□KR |
| 220           |             | 12.0 x 4.2    |                 |                    |                   |                 | HBU221□BB□□□KR |
| 330           |             | 15.0 x 4.2    |                 |                    |                   |                 | HBU331□BB□□□KR |
| 470           |             | 17.0 x 4.2    |                 |                    |                   |                 | HBU471□BB□□□KR |

**ORDERING INFORMATION, CERAMIC HIGH VOLTAGE DISC CAPACITORS, 3 KV (DC)**

| C<br>(pF)     | TOL.<br>(%) | D x s<br>(mm) | F ± 1 *<br>(mm) | d ± 0.05 *<br>(mm) | V ± 0.5 *<br>(mm) | CERAMIC<br>CODE | ORDERING CODE  |                |
|---------------|-------------|---------------|-----------------|--------------------|-------------------|-----------------|----------------|----------------|
| CLASS 1 N 750 |             |               |                 |                    |                   |                 |                |                |
| 10            | ± 10 %      | 7.0 x 4.0     | 10.0            | 0.6                | 1.3               | U               | HCU100□BC□□□KR |                |
| 15            |             | 7.0 x 4.0     |                 |                    |                   |                 | 1.4            | HCU150□BC□□□KR |
| 22            |             | 7.0 x 4.0     |                 |                    |                   |                 |                | HCU220□BC□□□KR |
| 33            |             | 7.0 x 4.0     |                 |                    | 1.6               |                 | HCU330□BC□□□KR |                |
| 47            |             | 8.0 x 4.0     |                 |                    |                   |                 | HCU470□BC□□□KR |                |
| 68            |             | 9.0 x 4.0     |                 |                    |                   |                 | HCU680□BC□□□KR |                |
| 82            |             | 10.0 x 4.4    |                 | 0.8                |                   |                 | HCU820□BC□□□KR |                |
| 100           |             | 10.0 x 4.4    |                 |                    |                   |                 | HCU101□BC□□□KR |                |
| 150           |             | 11.0 x 4.4    |                 |                    | HCU151□BC□□□KR    |                 |                |                |
| 220           |             | 15.0 x 4.4    |                 |                    | HCU221□BC□□□KR    |                 |                |                |
| 330           |             | 17.0 x 4.4    |                 | HCU331□BC□□□KR     |                   |                 |                |                |

\* Standard lead configuration, other lead spacing and diameter available on request.

**ORDERING CODE**

|     |                    |                                              |            |
|-----|--------------------|----------------------------------------------|------------|
| □   | 7th digit          | Capacitance Tolerance                        | ± 10 % = K |
| □□□ | 10th to 12th digit | Lead Configuration (See General Information) |            |
| R   | 14th digit         | RoHS Compliant Component                     |            |



| ORDERING INFORMATION, CERAMIC HIGH VOLTAGE DISC CAPACITORS, 4 KV (DC) |             |               |                 |                    |                   |                 |               |
|-----------------------------------------------------------------------|-------------|---------------|-----------------|--------------------|-------------------|-----------------|---------------|
| C<br>(pF)                                                             | TOL.<br>(%) | D x s<br>(mm) | F ± 1 *<br>(mm) | d ± 0.05 *<br>(mm) | V ± 0.5 *<br>(mm) | CERAMIC<br>CODE | ORDERING CODE |
| CLASS 1 N 750                                                         |             |               |                 |                    |                   |                 |               |
| 10                                                                    | ± 10 %      | 7.0 x 4.3     | 10.0            | 0.6                | 1.4               | U               | HDU100BD□□KR  |
| 15                                                                    |             | 7.0 x 4.3     |                 |                    |                   |                 | HDU150BD□□KR  |
| 22                                                                    |             | 7.0 x 4.3     |                 |                    |                   |                 | HDU220BD□□KR  |
| 33                                                                    |             | 7.0 x 4.3     |                 |                    |                   |                 | HDU330BD□□KR  |
| 47                                                                    |             | 9.5 x 4.3     |                 |                    |                   |                 | HDU470BD□□KR  |
| 68                                                                    |             | 9.5 x 4.7     |                 |                    |                   |                 | HDU680BD□□KR  |
| 82                                                                    |             | 11.0 x 4.7    |                 | 0.8                | 1.9               |                 | HDU820BD□□KR  |
| 100                                                                   |             | 11.0 x 4.7    |                 |                    |                   |                 | HDU101BD□□KR  |
| 150                                                                   |             | 13.0 x 4.7    |                 |                    |                   |                 | HDU151BD□□KR  |
| 220                                                                   |             | 15.0 x 4.7    |                 |                    |                   |                 | HDU221BD□□KR  |
| 330                                                                   |             | 17.0 x 4.7    |                 |                    |                   |                 | HDU331BD□□KR  |
| 470                                                                   |             | 20.0 x 4.7    |                 |                    |                   |                 | HDU471BD□□KR  |

| ORDERING INFORMATION, CERAMIC HIGH VOLTAGE DISC CAPACITORS, 5 KV (DC) |             |               |                 |                    |                   |                 |                |
|-----------------------------------------------------------------------|-------------|---------------|-----------------|--------------------|-------------------|-----------------|----------------|
| C<br>(pF)                                                             | TOL.<br>(%) | D x s<br>(mm) | F ± 1 *<br>(mm) | d ± 0.05 *<br>(mm) | V ± 0.5 *<br>(mm) | CERAMIC<br>CODE | ORDERING CODE  |
| CLASS 1 N 750                                                         |             |               |                 |                    |                   |                 |                |
| 22                                                                    | ± 10 %      | 7.0 x 4.8     | 12.5            | 0.6                | 2.2               | U               | HEU220□BE□□□KR |
| 33                                                                    |             | 9.3 x 4.8     |                 |                    |                   |                 | HEU330□BE□□□KR |
| 47                                                                    |             | 9.3 x 4.8     |                 |                    |                   |                 | HEU470□BE□□□KR |
| 68                                                                    |             | 11.8 x 5.2    |                 |                    |                   |                 | HEU680□BE□□□KR |
| 82                                                                    |             | 11.8 x 5.2    |                 | 0.8                | 2.4               |                 | HEU820□BE□□□KR |
| 100                                                                   |             | 11.8 x 5.2    |                 |                    |                   |                 | HEU101□BE□□□KR |
| 150                                                                   |             | 14.4 x 5.2    |                 |                    |                   |                 | HEU151□BE□□□KR |
| 220                                                                   |             | 16.3 x 5.2    |                 |                    |                   |                 | HEU221□BE□□□KR |
| 330                                                                   |             | 19.5 x 5.2    |                 |                    |                   |                 | HEU331□BE□□□KR |

| ORDERING INFORMATION, CERAMIC HIGH VOLTAGE DISC CAPACITORS, 6 KV (DC) |             |               |                 |                    |                   |                 |               |
|-----------------------------------------------------------------------|-------------|---------------|-----------------|--------------------|-------------------|-----------------|---------------|
| C<br>(pF)                                                             | TOL.<br>(%) | D x s<br>(mm) | F ± 1 *<br>(mm) | d ± 0.05 *<br>(mm) | V ± 0.5 *<br>(mm) | CERAMIC<br>CODE | ORDERING CODE |
| CLASS 1 N 750                                                         |             |               |                 |                    |                   |                 |               |
| 10                                                                    | ± 10 %      | 7.0 x 4.8     | 12.5            | 0.6                | 2.2               | U               | HFU100BF□□KR  |
| 15                                                                    |             | 7.0 x 4.8     |                 |                    |                   |                 | HFU150BF□□KR  |
| 22                                                                    |             | 7.0 x 4.8     |                 |                    |                   |                 | HFU220BF□□KR  |
| 33                                                                    |             | 9.5 x 4.8     |                 |                    |                   |                 | HFU330BF□□KR  |
| 47                                                                    |             | 9.5 x 4.8     |                 |                    |                   |                 | HFU470BF□□KR  |
| 68                                                                    |             | 12.0 x 5.2    |                 | 0.8                | 2.4               |                 | HFU680BF□□KR  |
| 82                                                                    |             | 12.0 x 5.2    |                 |                    |                   |                 | HFU820BF□□KR  |
| 100                                                                   |             | 12.0 x 5.2    |                 |                    |                   |                 | HFU101BF□□KR  |
| 150                                                                   |             | 15.0 x 5.2    |                 |                    |                   |                 | HFU151BF□□KR  |
| 220                                                                   |             | 17.0 x 5.2    |                 |                    |                   |                 | HFU221BF□□KR  |
| 330                                                                   |             | 20.0 x 5.2    |                 |                    |                   |                 | HFU331BF□□KR  |

\* Standard lead configuration, other lead spacing and diameter available on request.

| ORDERING CODE |                    |                                              |            |
|---------------|--------------------|----------------------------------------------|------------|
| □             | 7th digit          | Capacitance Tolerance                        | ± 10 % = K |
| □□□           | 10th to 12th digit | Lead Configuration (See General Information) |            |
| R             | 14th digit         | RoHS Compliant Component                     |            |



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