

## High Voltage Class 2 Ceramic DC Disc Capacitors, Screw Terminal Mounting, 15 kV<sub>DC</sub> to 40 kV<sub>DC</sub>


**RoHS**  
COMPLIANT

### FEATURES

- Class 2 ceramic (Y5U)
- Low inductance
- High insulation resistance
- Epoxy coating
- Screw terminal mounting
- Ceramic singlelayer capacitor

### APPLICATIONS

- High voltage power supplies
- CO<sub>2</sub> lasers
- X-ray equipment
- Welding equipment
- Industrial

### CAPACITANCE RANGE

100 pF to 10 nF

### RATED VOLTAGE (1)

- 15 kV<sub>DC</sub> (5.3 kV<sub>RMS</sub>)
- 20 kV<sub>DC</sub> (7.0 kV<sub>RMS</sub>)
- 30 kV<sub>DC</sub> (10.6 kV<sub>RMS</sub>)
- 40 kV<sub>DC</sub> (14.0 kV<sub>RMS</sub>)

#### Note

 (1) All kV<sub>RMS</sub> up to 60 Hz

### CERAMIC DIELECTRIC

Y5U (Class 2)

### MATERIAL

Capacitor elements made from class 2 ceramic in a molded epoxy case. Screw terminals: brass, silver plated.

### MARKING

Type designator, capacitance value, rated DC voltage, ceramic material code, production date code, Cera-mite logo.

### POWER DISSIPATION

Limit to 25 °C rise above ambient, measured on case.

### CAPACITANCE TOLERANCES

-20 % to +80 %

### QUICK REFERENCE DATA

| DESCRIPTION                | VALUE           |                 |                 |                 |
|----------------------------|-----------------|-----------------|-----------------|-----------------|
| Ceramic Class              | 2               |                 |                 |                 |
| Ceramic Dielectric         | Y5U             |                 |                 |                 |
| Type                       | 715C15<br>DK### | 715C20<br>DK### | 715C30<br>DK### | 715C40<br>DK### |
| Voltage (V <sub>DC</sub> ) | 15 000          | 20 000          | 30 000          | 40 000          |
| Min. Capacitance (pF)      | 1500            | 500             | 500             | 300             |
| Max. Capacitance (pF)      | 10 000          | 6800            | 4700            | 3300            |
| Mounting                   | Screw terminal  |                 |                 |                 |

### DIELECTRIC STRENGTH

150 % of rated voltage, charging current limited to 50 mA.

### DISSIPATION FACTOR tan δ

 $\leq 20 \times 10^{-3}$  (1 kHz)

### INSULATION RESISTANCE

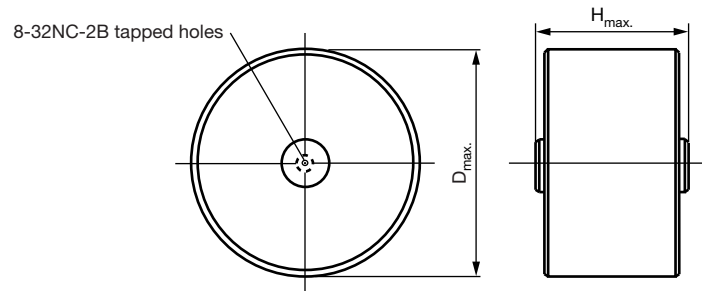
Min. 200 000 MΩ or 1000 ΩF min. at 25 °C.

### CORONA LIMIT

&lt; 5 pC at 50 % rated AC voltage.

### OPERATING TEMPERATURE RANGE

-30 °C to +85 °C

**DIMENSIONS**

**Notes**

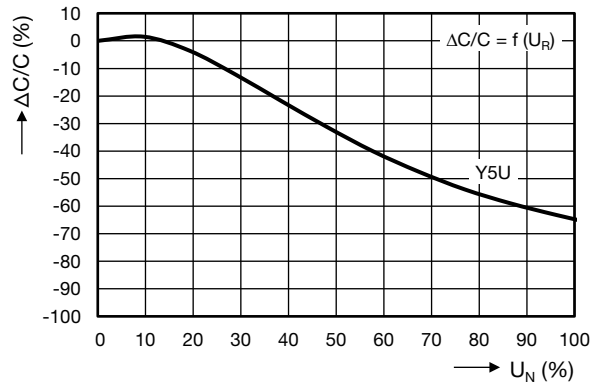
- Screw torque limit must be 12 inch pounds. Use #8-32, 3/16" long screw to prevent bottoming
- M5 metric terminals available on request, consult factory

| <b>ORDERING INFORMATION</b> |                           |                   |                       |            |
|-----------------------------|---------------------------|-------------------|-----------------------|------------|
| <b>715C15DKD20</b>          | <b>15 kV<sub>DC</sub></b> | <b>2000 pF</b>    | <b>-20 % TO +80 %</b> | <b>Y5U</b> |
| MODEL                       | RATED VOLTAGE             | CAPACITANCE VALUE | TOLERANCE             | CERAMIC    |

| <b>SAP PART NUMBER, ELECTRICAL, AND DIMENSIONAL DATA</b> in millimeters (inches) |         |                         |                                   |                                    |                   |                   |
|--|---------|-------------------------|-----------------------------------|------------------------------------|-------------------|-------------------|
| MODEL  | CERAMIC | CAPACITANCE VALUES (pF) | RATED VOLTAGE (kV <sub>DC</sub> ) | RATED VOLTAGE (kV <sub>RMS</sub> ) | D <sub>max.</sub> | H <sub>max.</sub> |
| <b>715C15DK###</b>   |         |                         |                                   |                                    |                   |                   |
| 715C15DKD15  | Y5U     | 1500                    | 15                                | 5.3                                | 26.7 (1.05)       | 22.9 (0.90)       |
| 715C15DKD20  |         | 2000                    |                                   |                                    | 33.0 (1.30)       |                   |
| 715C15DKD33  |         | 3300                    |                                   |                                    | 39.4 (1.55)       |                   |
| 715C15DKD47  |         | 4700                    |                                   |                                    | 33.0 (1.30)       |                   |
| 715C15DKS10  |         | 10 000                  |                                   |                                    | 45.7 (1.80)       |                   |
| <b>715C20DK###</b>   |         |                         |                                   |                                    |                   |                   |
| 715C20DKT50  | Y5U     | 500                     | 20                                | 7.0                                | 22.4 (0.88)       | 25.4 (1.00)       |
| 715C20DKD10  |         | 1000                    |                                   |                                    | 31.8 (1.25)       |                   |
| 715C20DKD13  |         | 1300                    |                                   |                                    | 33.0 (1.30)       |                   |
| 715C20DKD25  |         | 2500                    |                                   |                                    | 39.4 (1.55)       |                   |
| 715C20DKD33  |         | 3300                    |                                   |                                    | 45.7 (1.80)       |                   |
| 715C20DKD47  |         | 4700                    |                                   |                                    | 54.1 (2.13)       |                   |
| 715C20DKD68  |         | 6800                    |                                   |                                    | 61.5 (2.42)       |                   |
| <b>715C30DK###</b>   |         |                         |                                   |                                    |                   |                   |
| 715C30DKT50  | Y5U     | 500                     | 30                                | 10.6                               | 26.7 (1.05)       | 34.5 (1.36)       |
| 715C30DKD10  |         | 1000                    |                                   |                                    | 33.0 (1.30)       | 30.0 (1.18)       |
| 715C30DKD25  |         | 2500                    |                                   |                                    | 45.7 (1.80)       |                   |
| 715C30DKD33  |         | 3300                    |                                   |                                    | 54.1 (2.13)       |                   |
| 715C30DKD47  |         | 4700                    |                                   |                                    | 61.5 (2.42)       |                   |
| <b>715C40DK###</b>   |         |                         |                                   |                                    |                   |                   |
| 715C40DKT30  | Y5U     | 300                     | 40                                | 14.0                               | 22.4 (0.88)       | 34.5 (1.36)       |
| 715C40DKT50  |         | 500                     |                                   |                                    | 26.7 (1.05)       |                   |
| 715C40DKT78  |         | 780                     |                                   |                                    | 33.0 (1.30)       |                   |
| 715C40DKD10  |         | 1000                    |                                   |                                    | 39.4 (1.55)       |                   |
| 715C40DKD16  |         | 1600                    |                                   |                                    | 45.7 (1.80)       |                   |
| 715C40DKD25  |         | 2500                    |                                   |                                    | 54.1 (2.13)       |                   |
| 715C40DKD33  |         | 3300                    |                                   |                                    | 58.4 (2.30)       |                   |



**CAPACITANCE CHANGE VS. VOLTAGE** (typical)





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