

## High Voltage Class 1 Ceramic DC Disc Capacitors, Screw Terminal Mounting, 10 kV<sub>DC</sub> to 40 kV<sub>DC</sub>


**RoHS**  
COMPLIANT

### FEATURES

- Low dissipation factor of 0.2 % at 1 kHz
- N4700 (T3M) class 1, strontium-based ceramic dielectric
- Negligible piezoelectric / electrostrictive effect
- Low inductance
- High insulation resistance
- Epoxy coating
- Screw terminal mounting
- Ceramic singlelayer capacitor
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### APPLICATIONS

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

### CAPACITANCE RANGE

140 pF to 8 nF

### RATED VOLTAGE (1)

- 10 kV<sub>DC</sub> (3.5 kV<sub>RMS</sub>)
- 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 kV<sub>RMS</sub>)

#### Note

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

### CERAMIC DIELECTRIC

N4700 (class 1)

### MATERIAL

Capacitor elements made from class 1 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 %

QUICK REFERENCE DATA					
DESCRIPTION	VALUE				
Ceramic Class	1				
Ceramic Dielectric	N4700				
Type	715C10 KT###	715C15 KT###	715C20 KT###	715C30 KT###	715C40 KT###
Voltage (V <sub>DC</sub> )	10 000	15 000	20 000	30 000	40 000
Min. Capacitance (pF)	560	370	280	190	140
Max. Capacitance (pF)	8000	5300	4000	2700	2000
Mounting	Screw terminal				

### DIELECTRIC STRENGTH

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

### DISSIPATION FACTOR tan δ

 $\leq 2 \times 10^{-3}$  (1 kHz)

### INSULATION RESISTANCE

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

### CORONA LIMIT

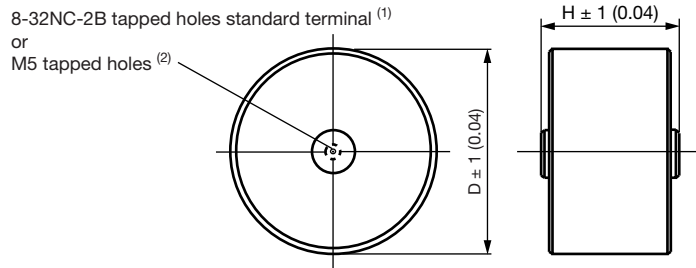
&lt; 5 pC at rated AC voltage

### OPERATING TEMPERATURE RANGE

-30 °C to +85 °C



**DIMENSIONS** in millimeters (inches)



**Notes**

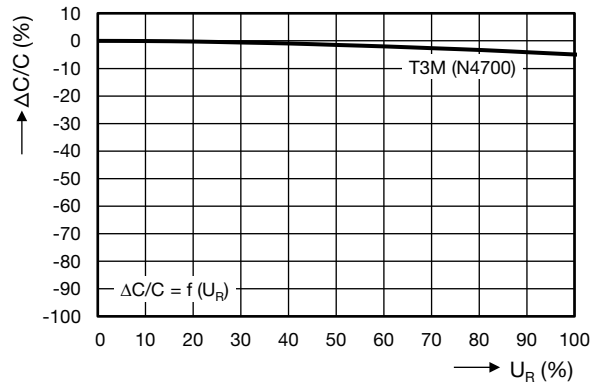
- (1) Screw torque limit must be 12 inch pounds. Use #8-32, 3/16" long screw to prevent bottoming
- (2) To order M5 terminals add "M5" suffix to model number, use screw length of 5 mm to prevent bottoming

ORDERING INFORMATION				
715C15KTD33	15 kV <sub>DC</sub>	3300 pF	± 20 %	N4700
MODEL	RATED VOLTAGE	CAPACITANCE VALUE	TOLERANCE	CERAMIC

SAP PART NUMBER, ELECTRICAL, AND DIMENSIONAL DATA							
MODEL	CERAMIC	CAPACITANCE VALUES (pF)	RATED VOLTAGE (kV <sub>DC</sub> )	RATED VOLTAGE (kV <sub>RMS</sub> )	D ± 1 mm (0.04")	H WITH #8-32 TERMINALS ± 1 mm (0.04")	H WITH M5 METRIC TERMINALS ± 1 mm (0.04")
<b>715C10KT###</b>							
715C10KTT56	N4700	560	10	3.5	21 (0.83)	18 (0.71)	n/a
715C10KTD10		1000			25 (0.98)		
715C10KTD12		1200			25 (0.98)		
715C10KTD22		2200			38 (1.50)		19 (0.75)
715C10KTD28		2800			38 (1.50)		
715C10KTD50		5000			48 (1.89)		
715C10KTD80		8000			60 (2.36)		
<b>715C15KT###</b>							
715C15KTT37	N4700	370	15	5.3	21 (0.83)	20 (0.79)	n/a
715C15KTD10		1000			32 (1.26)		n/a
715C15KTD19		1900			38 (1.50)		22 (0.87)
715C15KTD33		3300			48 (1.89)		
715C15KTD53		5300			60 (2.36)		
<b>715C20KT###</b>							
715C20KTT28	N4700	280	20	7	21 (0.83)	23 (0.91)	n/a
715C20KTT56		560			25 (0.98)		n/a
715C20KTD10		1000			32 (1.26)		24 (0.94)
715C20KTD14		1400			38 (1.50)		
715C20KTD25		2500			48 (1.89)		
715C20KTD40		4000			60 (2.36)		
<b>715C30KT###</b>							
715C30KTT19	N4700	190	30	10.6	21 (0.83)	28 (1.10)	n/a
715C30KTT40		400			32 (1.26)		n/a
715C30KTT59		590			32 (1.26)		29 (1.14)
715C30KTT94		940			38 (1.50)		
715C30KTD17		1700			48 (1.89)		
715C30KTD27		2700			60 (2.36)		
<b>715C40KT###</b>							
715C40KTT14	N4700	140	40	14	21 (0.83)	31 (1.22)	n/a
715C40KTT44		440			32 (1.26)		32 (1.26)
715C40KTT70		700			38 (1.50)		
715C40KTD10		1000			44 (1.73)		
715C40KTD13		1300			48 (1.89)		
715C40KTD20		2000			60 (2.36)		



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



**Note**

- Curve valid for 715C..KT..., except: 715C10KTD10, 715C10KTD12, and 715C10KTD22

**RELATED DOCUMENTS**

General Information

[www.vishay.com/doc?23140](http://www.vishay.com/doc?23140)



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