

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



### DESIGN SUPPORT TOOLS

[click logo to get started](#)

**3D**  
Models  
Available

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 $\tan \delta$

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

### INSULATION RESISTANCE

Min. 200 000 M $\Omega$  or 1000  $\Omega$ F min. at 25 °C

### CORONA LIMIT

&lt; 5 pC at rated AC voltage

### OPERATING TEMPERATURE RANGE

-30 °C to +85 °C

### 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)

**RoHS**  
COMPLIANT

### 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 <sup>(1)</sup>

- 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

<sup>(1)</sup> 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

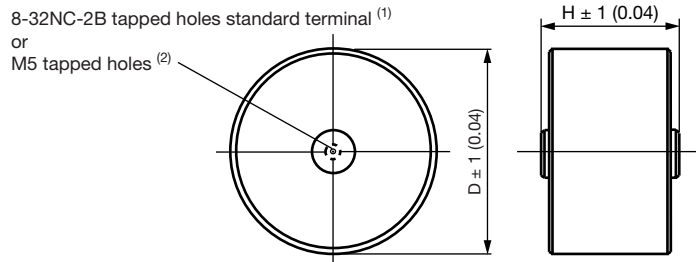
Type designator, capacitance value, rated DC voltage, ceramic material code, production date code, Cera-Mite logo.

### POWER DISSIPATION

Limit to 20 °C rise above ambient, measured on case.

### CAPACITANCE TOLERANCES

 $\pm 20 \%$

**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**

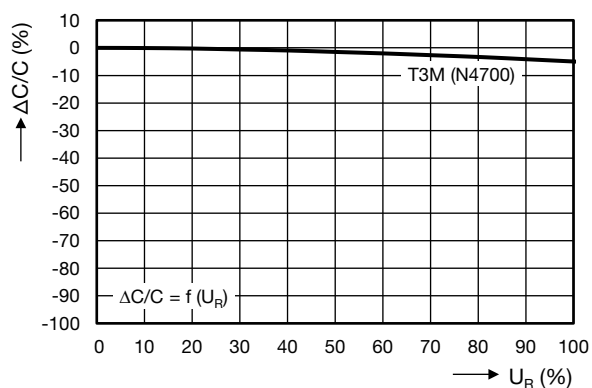
<b>715C15KTD33</b>	<b>15 kV<sub>DC</sub></b>	<b>3300 pF</b>	<b>± 20 %</b>	<b>N4700</b>
MODEL	RATED VOLTAGE	CAPACITANCE VALUE	TOLERANCE	CERAMIC

**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")
715C10KT###							
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)		
715C15KT###							
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)		
715C20KT###							
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)		
715C30KT###							
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)		
715C40KT###							
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)



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

[715C40KTD10](#) [715C30KTT40](#) [715C15KTD19](#) [715C40KTD13](#) [715C20KTT28](#) [715C40KTT14](#) [715C40KTT70](#)  
[715C10KTT56](#) [715C15KTD10](#) [715C10KTD10](#) [715C30KTT59](#) [715C40KTD20](#) [715C20KTD25](#) [715C30KTD27](#)  
[715C10KTD22](#) [715C30KTT19](#) [715C30KTD17](#) [715C10KTD80](#) [715C20KTD40](#) [715C20KTD10](#) [715C30KTT94](#)  
[715C20KTD14](#) [715C20KTT56](#) [715C15KTD33](#) [715C15KTD53](#) [715C40KTT44](#) [715C10KTD50](#)