High Voltage Class 1 Ceramic DC Disc Capacitors, Screw Terminal Mounting, 10 kV_{DC} to 40 kV_{DC}

QUICK REFERENCE DATA					
DESCRIPTION	VALUE				
Ceramic Class	1				
Ceramic Dielectric	N4700				
Type	715C10 KT###	715C15 KT###	715C20 KT###	715C30 KT###	715C40 KT###
Voltage (V_{DC})	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

≤ 2 x 10^{-3} (1 kHz)

INSULATION RESISTANCE

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

CORONA LIMIT

< 5 pC at rated AC voltage

OPERATING TEMPERATURE RANGE

-30 °C to +85 °C

FEATURES

RoHS COMPLIANT

- 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

APPLICATIONS

- High voltage power supplies
- CO_2 lasers
- X-ray equipment
- Welding equipment
- Industrial

CAPACITANCE RANGE

140 pF to 8 nF

RATED VOLTAGE (1)

- 10 kV_{DC} (3.5 kV_{RMS})
- 15 kV_{DC} (5.3 kV_{RMS})
- 20 kV_{DC} (7.0 kV_{RMS})
- 30 kV_{DC} (10.6 kV_{RMS})
- 40 kV_{DC} (14 kV_{RMS})

Note

(1) All kV_{RMS} 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.

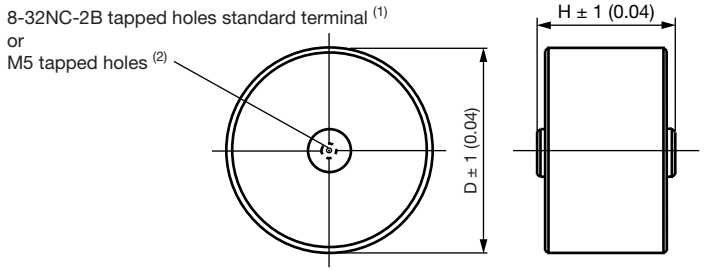
POWER DISSIPATION

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

CAPACITANCE TOLERANCES

± 20 %

DIMENSIONS in millimeters (inches)



Notes

(1) Screw torque limit must be 12 inch pounds. Use #8-32, 3/16" long screw to prevent bottoming

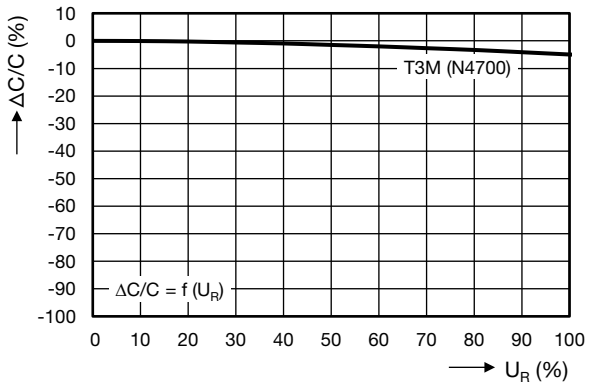
(2) To order M5 terminals add “M5” suffix to model number, use screw length of 5 mm to prevent bottoming

ORDERING INFORMATION				
715C15KTD33	**15 kV_{DC}**	**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_{DC})	RATED VOLTAGE (kV_{RMS})	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

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