High Voltage Class 2 Ceramic DC Disc Capacitors, 10 kV_{DC} to 40 kV_{DC} / 3.5 kV_{AC} to 14 kV_{AC}, Screw Terminal Mounting



FEATURES

- Class 2 ceramic (Y5U)
- 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

RoHS COMPLIANT

APPLICATIONS

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

LINKS TO ADDITIONAL RESOURCES

3D Models

QUICK REFERENCE DATA					
DESCRIPTION	VALUE				
Ceramic Class	2				
Ceramic Dielectric	Y5U				
Type	715C10DK###	715C15DK###	715C20DK###	715C30DK###	715C40DK###
Voltage (V_{DC})	10 000	15 000	20 000	30 000	40 000
Min. Capacitance (pF)	10 000	1500	500	500	300
Max. Capacitance (pF)	20 000	10 000	6800	4700	3300
Mounting	Screw terminal				

DIELECTRIC STRENGTH

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

DISSIPATION FACTOR tan δ

≤ 20 x 10^{-3} (1 kHz)

INSULATION RESISTANCE

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

Note

- Exemptions: 715C20DKD68 min. 100 000 MΩ
  715C10DKS20 min. 50 000 MΩ
  715C10DKS10 min. 50 000 MΩ

CORONA LIMIT

< 5 pC at 50 % rated AC voltage

OPERATING TEMPERATURE RANGE

-30 °C to +85 °C

CAPACITANCE RANGE

300 pF to 20 nF

CAPACITANCE TOLERANCES

-20 % to +80 %

CERAMIC DIELECTRIC

Y5U (Class 2)

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} (14.0 kV_{RMS})

Note

(1) All kV_{RMS} up to 60 Hz

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.

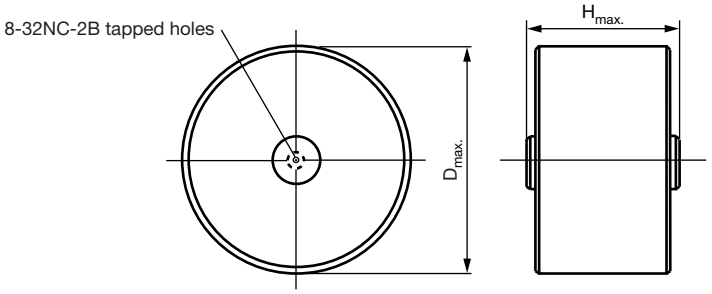
POWER DISSIPATION

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

For technical questions, contact: powcap@vishay.com

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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

ORDERING INFORMATION

715C15DKD20	15 kV_{DC}	2000 pF	-20 % TO +80 %	Y5U
MODEL	RATED VOLTAGE	CAPACITANCE VALUE	TOLERANCE	CERAMIC

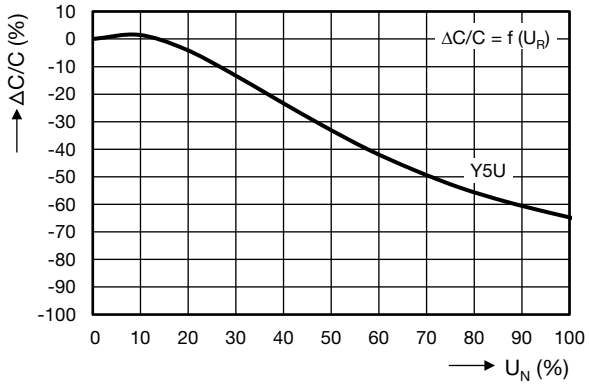
SAP PART NUMBER, ELECTRICAL, AND DIMENSIONAL DATA in millimeters (inches)

MODEL	CERAMIC	CAPACITANCE VALUES (pF)	RATED VOLTAGE (kV_{DC})	RATED VOLTAGE (kV_{RMS})	$D_{max.}$	$H_{max.}$
715C10DK###						
715C10DKS10	Y5U	10 000	10	3.5	45.7 (1.80)	22.0 (0.87)
715C10DKS20		20 000			54.1 (2.13)	19.8 (0.78)
715C15DK###						
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)	
715C20DK###						
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)	
715C30DK###						
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)	
715C40DK###						
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)	

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CAPACITANCE CHANGE VS. VOLTAGE (typical)



RELATED DOCUMENTS	
General Information	www.vishay.com/doc?23140
3D Models	www.vishay.com/doc?22174

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