

High Voltage Class 2 Ceramic DC Disc Capacitors, 15 kV_{DC} to 40 kV_{DC} / 5.3 kV_{AC} to 14 kV_{AC}, Screw Terminal Mounting


DESIGN SUPPORT TOOLS
[click logo to get started](#)
3D
Models
Available

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
- CO₂ lasers
- X-ray equipment
- Welding equipment
- Industrial

QUICK REFERENCE DATA				
DESCRIPTION	VALUE			
Ceramic Class	2			
Ceramic Dielectric	Y5U			
Type	715C15DK###	715C20DK###	715C30DK###	715C40DK###
Voltage (V _{DC})	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
 < 5 pC at 50 % rated AC voltage.

OPERATING TEMPERATURE RANGE

-30 °C to +85 °C

CAPACITANCE RANGE

100 pF to 10 nF

CAPACITANCE TOLERANCES

-20 % to +80 %

CERAMIC DIELECTRIC

Y5U (Class 2)

RATED VOLTAGE ⁽¹⁾

- 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

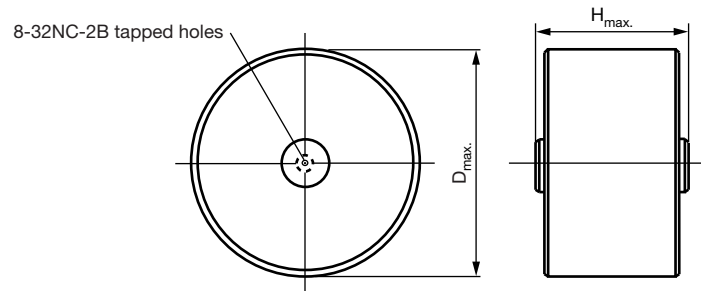
Capacitor elements made from class 2 ceramic in a molded epoxy case. Screw terminals: brass, silver plated.

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.

DIMENSIONS

Notes

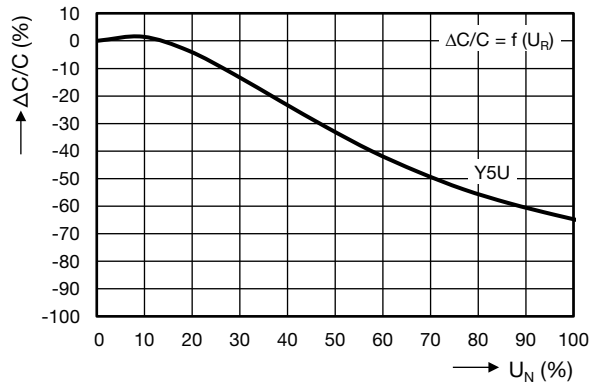
- Screw torque limit must be 12 inch pounds. Use #8-32, 3/16" long screw to prevent bottoming
- M5 metric terminals available on request, consult factory

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.}
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)	



CAPACITANCE CHANGE VS. VOLTAGE (typical)



RELATED DOCUMENTS

General Information

www.vishay.com/doc?23140



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