

Ceramic Singlelayer DC Disc Capacitors, 4 kV_{DC} General Purpose



FEATURES

- High capacitance in small sizes
- Low losses
- Wide range of different lead styles
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- Lighting ballasts
- SMPS

DESIGN

The capacitors consist of a ceramic disc which is silver plated on both sides. Connection leads are made of tinned copper having diameters of 0.6 mm or 0.8 mm.

The capacitors may be supplied with straight or kinked leads having a lead spacing of 10.0 mm or 12.5 mm.

Coating is made of blue colored flame retardant epoxy resin in accordance with UL 94 V-0.

CAPACITANCE RANGE

10 pF to 4.7 nF

RATED VOLTAGE

4 kV_{DC}

DIELECTRIC STRENGTH

6000 V_{DC}, 2 s Component test

INSULATION RESISTANCE AT 500 V_{DC}

≥ 10 000 MΩ (60 s)

TOLERANCE ON CAPACITANCE

± 10 %, ± 20 %

DISSIPATION FACTOR

Class 1:

$C < 30 \text{ pF: } \left(\frac{100 \text{ pF}}{C} + 0.7 \right) \times 10^{-4} \text{ max. (1 MHz)}$

$C \geq 30 \text{ pF: max. 0.1 % (1 MHz)}$

Class 2: max. 2.5 % (1 kHz)

QUICK REFERENCE DATA

DESCRIPTION	VALUE	
Ceramic Class	1	2
Ceramic Dielectric	N750, Y5U	
Voltage (V _{DC})	4000	
Min. Capacitance (pF)	10	33
Max. Capacitance (pF)	470	4700
Mounting	Radial	

MARKING

Marking indicates, capacitance, tolerance code, and rated voltage.

OPERATING TEMPERATURE RANGE

-40 °C to +85 °C

TEMPERATURE CHARACTERISTICS

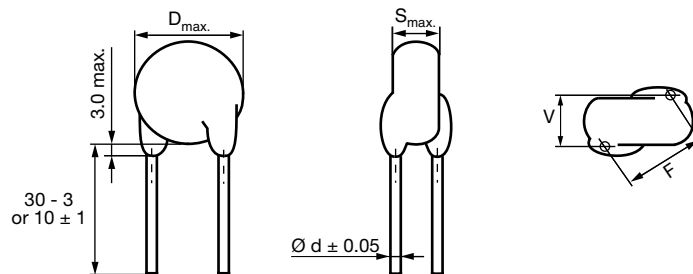
Class 1 N750 (U2J)

Class 2 Y5U

SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60068-1):
40/085/21

DIMENSIONS in millimeters



ORDERING INFORMATION

CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D _{max.} (mm)	BODY THICKNESS S _{max.} (mm)	LEAD SPACING ⁽¹⁾ F (mm) ± 1 mm	LEAD DIAMETER ⁽¹⁾ d (mm) ± 0.05 mm	WIDTH ⁽¹⁾ V (mm) ± 0.5 mm	ORDERING CODE	
							MISSING DIGITS SEE ORDERING CODE BELOW	
N750 (U2J)								
10	± 10	7.0	4.3	10.0	0.6	1.7	HDU100KBD###KR	
15							HDU150KBD###KR	
22							HDU220KBD###KR	
33							HDU330KBD###KR	
47							HDU470KBD###KR	
68		9.5	4.7		0.8	1.9	HDU680KBD###KR	
82							HDU820KBD###KR	
100		HDU101KBD###KR						
150		HDU151KBD###KR						
220		HDU221KBD###KR						
330		HDU331KBD###KR						
470		HDU471KBD###KR						
Y5U (2E3)								
33	± 20 ⁽²⁾	8.0	4.5	12.5	0.6	1.9	HDE330#BD###KR	
47			5.0			2.3	HDE470#BD###KR	
68							HDE680#BD###KR	
100							HDE101#BD###KR	
150							HDE151#BD###KR	
220							HDE221#BD###KR	
330							2.5	HDE331#BD###KR
470								HDE471#BD###KR
680			HDE681#BD###KR					
1000		9.0	0.8		2.7		HDE102#BD###KR	
1500		10.0				HDE152#BD###KR		
2200		12.0				HDE222#BD###KR		
3300		13.0				HDE332#BD###KR		
4700		15.0				HDE472#BD###KR		
		18.0						

Notes

⁽¹⁾ Standard lead configuration, other lead spacing and diameter available on request

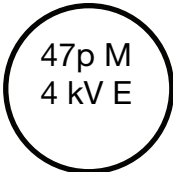
⁽²⁾ ± 10 % available on request



ORDERING CODE

#	7 th digit	Capacitance tolerance	$\pm 10\% = K, \pm 20\% = M$				
###	10 th to 12 th digit	Lead configuration	see "General Information"				
Example	HDE Series	100 Capacitance value	M Tolerance code	BD Voltage code	EF0 Lead configuration	K Internal code	R RoHS compliant

MARKING

 47p M 4 kV E HDU 10 pF to 100 pF HDE 33 pF to 1.5 nF	 n47 K HDU 150 pF to 470 pF HDE 2.2 nF to 4.7 nF
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RELATED DOCUMENTS

General Information	www.vishay.com/doc?22001
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