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

Pb

e3

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$_{DC}$
$\geq$ 10 000 MΩ (60 s)

TOLERANCE ON CAPACITANCE
$\pm$ 10 %, $\pm$ 20 %

DISSIPATION FACTOR
Class 1:

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

C $\geq$ 30 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
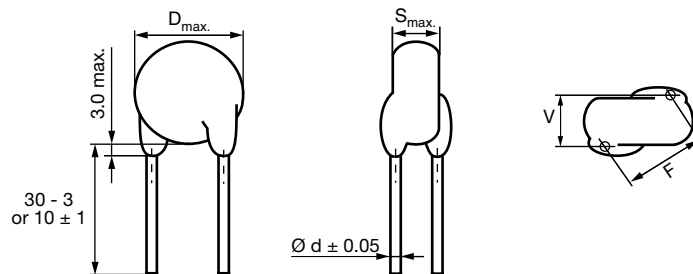-40 °C to +85 °C

TEMPERATURE CHARACTERISTICS
Class 1   N750 (U2J)

Class 2   Y5U

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

For technical questions, contact: slcap@vishay.com

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		7.0	4.3		0.6	1.7	HDU100KBD###KR
15							HDU150KBD###KR
22							HDU220KBD###KR
33						1.9	HDU330KBD###KR
47		9.5					HDU470KBD###KR
68	± 10			10.0			HDU680KBD###KR
82		11.0					HDU820KBD###KR
100							HDU101KBD###KR
150		13.0	4.7		0.8		HDU151KBD###KR
220		15.0					HDU221KBD###KR
330		17.0					HDU331KBD###KR
470		20.0					HDU471KBD###KR
Y5U (2E3)							
33			4.5			1.9	HDE330#BD###KR
47						2.3	HDE470#BD###KR
68							HDE680#BD###KR
100		8.0			0.6		HDE101#BD###KR
150							HDE151#BD###KR
220							HDE221#BD###KR
330	± 20 [2]			12.5		2.5	HDE331#BD###KR
470			5.0				HDE471#BD###KR
680		9.0					HDE681#BD###KR
1000		10.0					HDE102#BD###KR
1500		12.0					HDE152#BD###KR
2200		13.0			0.8	2.7	HDE222#BD###KR
3300		15.0					HDE332#BD###KR
4700		18.0					HDE472#BD###KR

Notes

[1] Standard lead configuration, other lead spacing and diameter available on request
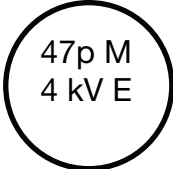
[2] ± 10 % available on request

ORDERING CODE

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

MARKING

HDU 10 pF to 100 pF
HDE 33 pF to 1.5 nF

HDU 150 pF to 470 pF
HDE 2.2 nF to 4.7 nF

RELATED DOCUMENTS

General Information	www.vishay.com/doc?22001

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