

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



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

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 %

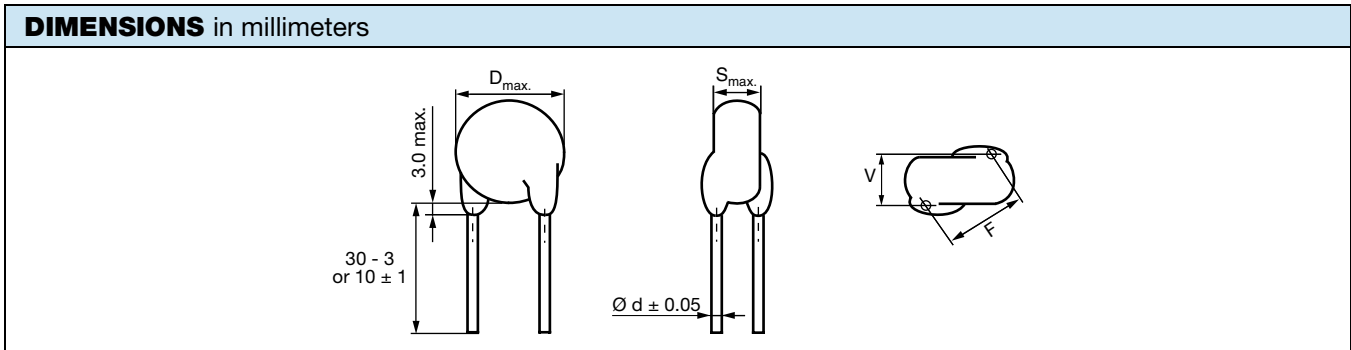
DISSIPATION FACTOR

Class 1:

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

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

Class 2: max. 2.5 % (1 kHz)



ORDERING INFORMATION														
CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D_{max} (mm)	BODY THICKNESS S_{max} (mm)	LEAD SPACING ⁽¹⁾ F (mm) $\pm 1 \text{ mm}$	LEAD DIAMETER ⁽¹⁾ d (mm) $\pm 0.05 \text{ mm}$	WIDTH ⁽¹⁾ V (mm) $\pm 0.5 \text{ mm}$	ORDERING CODE MISSING DIGITS SEE ORDERING CODE BELOW							
N750 (U2J)														
10	± 10	7.0	4.3	$\pm 1 \text{ mm}$	0.6	1.7	HDU100KBD###KR							
15							HDU150KBD###KR							
22							HDU220KBD###KR							
33							HDU330KBD###KR							
47							HDU470KBD###KR							
68							HDU680KBD###KR							
82		11.0	4.7		10.0	0.8	1.9	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	$\pm 1 \text{ mm}$	0.6	1.9	HDE330#BD###KR
47	5.0	12.5	HDE470#BD###KR											
68			HDE680#BD###KR											
100			2.3	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	0.8	2.7	HDE102#BD###KR											
1500			HDE152#BD###KR											
2200			HDE222#BD###KR											
3300			HDE332#BD###KR											
4700			HDE472#BD###KR											

Notes

- ⁽¹⁾ Standard lead configuration, other lead spacing and diameter available on request
- ⁽²⁾ $\pm 10 \%$ available on request



ORDERING CODE							
#	7 th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
###	10 th to 12 th 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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