



# SINGLE LAYER CERAMIC DISC CAPACITORS

H Series 500 V (DC) and 1 kV (DC)



## Ceramic Disc Capacitor

### KEY BENEFITS

- High capacitance in small size
- Inside kinked leads (preferred)
- WEEE/RoHS compliance, acc. EU directive 2002/95/EC

### KEY SPECIFICATIONS

- Capacitance range: 1 nF to 4.7 nF  
Class 2 X7R, at 1 kHz,  $1 \pm 0.2$  V (RMS)
- Dielectric strength: 250 % of rated voltage for 500 V;  
200 % of rated voltage for 1 kV
- Insulation resistance:  $\geq 10000$  M $\Omega$
- Acc. IEC 60384-9 and EIA 198
- Operating temperature:  $-55$  °C to  $+125$  °C
- Climatic category: 55/125/21
- Dissipation factor:  $\leq 2.5$  %

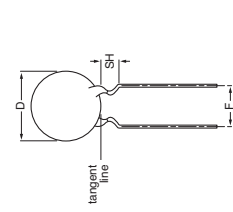
### APPLICATIONS

- Bypassing
- Coupling
- SMPS

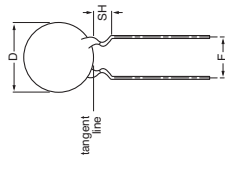
Datasheet is available on our web site at [www.vishay.com](http://www.vishay.com)  
for H Series 500 V (DC) and 1 kV (DC) - <http://www.vishay.com/doc?28540>

### Ceramic Disc Capacitors

## Class 2, 500 V, 1 kV (DC) General Purpose



Capacitors with 5 mm (0.20") lead spacing



Capacitors with 7.5 mm (0.30") lead spacing

#### FEATURES

- High capacitance in small size
- Kinked (preferred) or straight leads
- Lead (Pb)-free available

#### APPLICATIONS

- Bypassing
- Coupling
- Resonant circuit

#### DESIGN

The capacitors consist of a ceramic disc both sides of which are silver-plated. Connection leads are made of tinned copper having a diameter of 0.6 mm.

The capacitors have inward kinked leads with a spacing of 5 mm (0.200") or 7.5 mm (0.300") and a lead length from 4 to 30 mm. Encapsulation is made of phenolic resin for 500 V (DC) and epoxy resin for 1 kV (DC).

#### CAPACITANCE RANGE:

Class 2, at 1 kHz, 1 ± 0.2 V (RMS); 1000 to 4700 pF

#### RATED DC VOLTAGE:

500 V and 1 kV

#### DIELECTRIC STRENGTH:

250 % of rated voltage for 500 V (DC)  
200 % of rated voltage for 1 kV (DC)

#### INSULATION RESISTANCE AT 500 V (DC):

≥ 10 000 MΩ

#### TOLERANCE ON CAPACITANCE:

± 10 %; ± 20 %

#### DISSIPATION FACTOR:

Class 2, ≤ 2.5 %

#### TEMPERATURE COEFFICIENTS:

Class 2 X7R

#### SECTIONAL SPECIFICATIONS:

Class 2 IEC 60 384-9,  
EIA 198

#### CLIMATIC CATEGORY:

Class 2 55/125/21

#### OPERATING TEMPERATURE RANGE:

Class 2 - 55 to +125 °C

#### MARKING

Marking indicates capacitance value and tolerance in accordance with "EIA 198".  
The capacitors meet the essential requirements of "EIA 198".  
Unless stated otherwise all electrical values apply, at an ambient temperature of 25 ± 3 °C, at normal atmospheric conditions.



RoHS COMPLIANT

ORDERING INFORMATION (PREFERRED TYPES), CLASS 2, 500 V (DC), KINKED			CLEAR TEXT CODE		
C (pF)	TOL. (%)	D <sub>max</sub> (mm)	LEAD SPACING F (mm)	SH <sup>(2)</sup> (mm)	13 <sup>th</sup> DIGIT: T = REEL; U = AMMO; 3 = BULK
<b>CLASS 2 X7R</b>					
1000		6.5			H102K25X7R16.J5R
1500		7.5	5.0	4.0	H152K29X7R16.J5R
2200	± 10	8.5			H222K33X7R16.J5R
3300		10.0			H332K39X7R16.J5R
4700		12.0	7.5		H472K47X7R16.J7R

#### Notes

1. Maximum thickness 3.5 mm.
2. SH = seated height.
3. Lead style codes refer to inward kinked leads. Other styles available on request.

ORDERING INFORMATION (PREFERRED TYPES), CLASS 2, 1kV (DC), KINKED			CLEAR TEXT CODE		
C (pF)	TOL. (%)	D <sub>max</sub> (mm)	LEAD SPACING F (mm)	SH <sup>(2)</sup> (mm)	14 <sup>th</sup> DIGIT: T = REEL; U = AMMO; 3 = BULK
<b>CLASS 2 X7R</b>					
1000		6.5			H102K25X7R16.J5R
1500		8.0			H152K31X7R16.J5R
2200		9.0	5.0	4.0	H222K35X7R16.J5R
3300	± 10	10.5			H332K41X7R16.J5R
4700		12.0	7.5		H472K47X7R16.J7R

#### Notes

1. Maximum thickness 4.0 mm.
2. SH = seated height.
3. Lead style codes refer to inward kinked leads. Other styles available on request.

D <sub>max</sub> (mm)	SIZE CODE	PACKAGING QUANTITIES	
		BULK	REEL
6.5 (0.25")	25		
7.5 (0.29")	29		
8.5 (0.33")	33	1000	2000
10.0 (0.39")	39		
11.0 (0.43")	43		
12.0 (0.47")	47		
13.5 (0.53")	53	500	
15.0 (0.59")	59		
17.5 (0.69")	69		

#### Note

1. The capacitors are supplied in bulk packaging (cardboard boxes), in tape on reel or in ammpack

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