

Ceramic Singlelayer DC Disc Capacitors, 1 kV_{DC} General Purpose


RoHS
COMPLIANT

FEATURES

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

APPLICATIONS

- Lighting ballasts
- SMPS

DESIGN

The capacitors consist of ceramic disc both sides of which are silver plated. 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 5.0 mm or 7.5 mm.

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

CAPACITANCE RANGE

10 pF to 22 nF

RATED VOLTAGE

1 kV_{DC}

DIELECTRIC STRENGTH

1750 kV_{DC}, 2 s Component test

INSULATION RESISTANCE AT 500 V_{DC}

≥ 10 000 MΩ (60 s)

TOLERANCE ON CAPACITANCE

± 10 %, ± 20 %, -20 % +50 %

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, Y5T, Y5U, Y5V	
Voltage (V _{AC})	1000	
Min. Capacitance (pF)	10	47
Max. Capacitance (pF)	680	22 000
Mounting	Radial	

MARKING

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

OPERATING TEMPERATURE RANGE

-40 °C to +85 °C

TEMPERATURE CHARACTERISTICS

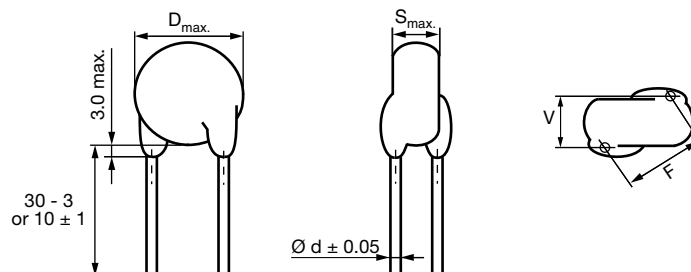
Class 1 N750 (U2J)

Class 2 Y5T, Y5U, Y5V

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	3.0	7.5	0.6	1.4	HAU100KBA...KR		
15							HAU150KBA...KR		
22							HAU220KBA...KR		
33							HAU330KBA...KR		
47							HAU470KBA...KR		
68		8.0	3.0				HAU680KBA...KR		
82							HAU820KBA...KR		
100							HAU101KBA...KR		
150							HAU151KBA...KR		
220							HAU221KBA...KR		
330		3.5	3.5				HAU331KBA...KR		
470							HAU471KBA...KR		
560							HAU561KBA...KR		
680							HAU681KBA...KR		
Y5T (2D3)									
47	± 10, ± 20	7.0	3.0	5.0	0.6	1.2	HAZ470.BA...KR		
56							HAZ560.BA...KR		
68							HAZ680.BA...KR		
82							HAZ820.BA...KR		
100							HAZ101.BA...KR		
150							HAZ151.BA...KR		
220							HAZ221.BA...KR		
330							HAZ331.BA...KR		
470							HAZ471.BA...KR		
680							HAZ681.BA...KR		
1000							9.0	9.0	HAZ102.BA...KR
1500									HAZ152.BA...KR
2200									HAZ222.BA...KR
3300		HAZ332.BA...KR							
4700		HAZ472.BA...KR							
		7.5		7.5					



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
Y5U (2E3)							
1000	± 20	7.0	3.0	5.0	0.6	1.2	HAE102MBA...KR
1500		9.0					HAE152MBA...KR
2200							HAE222MBA...KR
3300							HAE332MBA...KR
4700		11.0					HAE472MBA...KR
6800		13.0	HAE682MBA...KR				
10000		15.0	7.5	HAE103MBA...KR			
Y5V (2F3)							
2200	-20/+50 ⁽²⁾	7.0	3.0	5.0	0.6	1.2	HAX222.BA...KR
3300		9.0					HAX332.BA...KR
4700							HAX472.BA...KR
6800		12.0		7.5			HAX682.BA...KR
10000							HAX103.BA...KR
15000			17.0				HAX153.BA...KR
22000			18.0				HAX223.BA...KR

Notes

⁽¹⁾ Standard lead configuration, other lead spacing and diameter available on request⁽²⁾ ± 20 % available on request

ORDERING CODE

.	7 th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M, -20 %/+50 % = S				
...	10 th to 12 th digit	Lead configuration	see "General Information"				
Example	HAU	101	K	BA	BFG	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING

 HAU 10 pF to 330 pF HAZ 47 pF to 2.2 nF HAE 1.0 nF to 4.7 nF	 HAU 470 pF to 680 pF HAZ 3.3 nF to 4.7 pF HAE 6.8 nF to 10 nF	 HAX 2.2 nF to 6.8 nF	 HAX 8.2 nF to 22 nF
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RELATED DOCUMENTS

General Information	www.vishay.com/doc?22001
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