Ceramic Singlelayer DC Disc Capacitors, 3 kV_{DC} General Purpose

QUICK REFERENCE DATA		
DESCRIPTION	VALUE	
Ceramic Class	1	2
Ceramic Dielectric	N750, Y5T, Y5U	
Voltage (V_{AC})	3000	
Min. Capacitance (pF)	10	68
Max. Capacitance (pF)	330	10 000
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 Y5S, Y5U, Y5V

SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60068-1):

40/085/21

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

Pb e3 RoHS COMPLIANT

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 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

3 kV_{DC}

DIELECTRIC STRENGTH

5000 V_{DC}, 2 s Component test

INSULATION RESISTANCE AT 500 V_{DC}

≥ 10 000 MΩ (60 s)

TOLERANCE ON CAPACITANCE

± 10 %, ± 20 %

DISSIPATION FACTOR

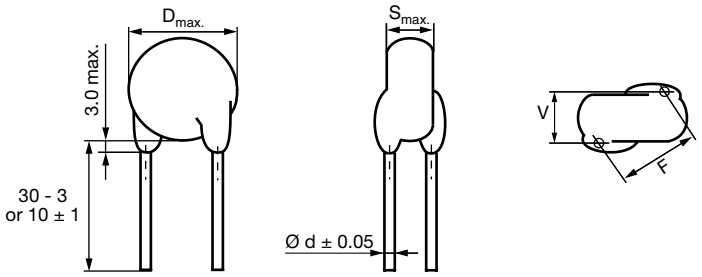
Class 1:

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

C ≥ 30 pF: Max. 0.1 % (1 MHz)

Class 2: Max. 2.5 % (1 kHz)

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	4.0	10.0	0.6	1.3	HCU100KBC...KR
15							HCU150KBC...KR
22							HCU220KBC...KR
33							HCU330KBC...KR
47		8.0				1.4	HCU470KBC...KR
68		9.0					HCU680KBC...KR
82		10.0	4.4		0.8	1.6	HCU820KBC...KR
100							HCU101KBC...KR
150		11.0					HCU151KBC...KR
220		15.0					HCU221KBC...KR
330		17.0					HCU331KBC...KR
Y5T (2D3)							
68	± 10, ± 20	7.0	4.0	10.0	0.6	1.8	HCZ680MBC...KR
82							HCZ820MBC...KR
100							HCZ101MBC...KR
120							HCZ121MBC...KR
150							HCZ151MBC...KR
180		8.0					HCZ181MBC...KR
220							HCZ221MBC...KR
330							HCZ331MBC...KR
470		10.0					HCZ471MBC...KR
680							HCZ681MBC...KR
1000		11.0			0.8	2.0	HCZ102MBC...KR
1200		15.0					HCZ122MBC...KR
1500							HCZ152MBC...KR
2200		17.0					HCZ222MBC...KR
3300		21.0					HCZ332MBC...KR
4700							HCZ472MBC...KR
6800		25.0					HCZ682MBC...KR

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)							
470	± 20	7.0	4.0	10.0	0.6	2.0	HCE471MBC...KR
680		8.0					HCE681MBC...KR
1000		9.0					HCE102MBC...KR
1500		11.0					HCE152MBC...KR
2200							HCE222MBC...KR
3300		15.0			0.8	2.2	HCE332MBC...KR
4700		17.0					HCE472MBC...KR
6800		21.0					HCE682MBC...KR
10 000		25.0				2.5	HCE103MBC...KR

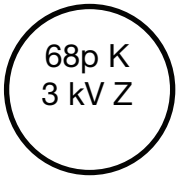
Note

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

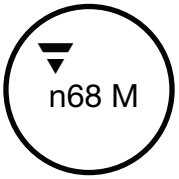
ORDERING CODE

.	7th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
...	10th to 12th digit	Lead configuration	see "General Information"				
Example	**HCE**	**152**	**M**	**BC**	**DD0**	**K**	**R**
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING



HCU 10 pF to 150 pF
HCZ 68 pF to 1.0 nF
HCE 470 pF to 2.2 nF



HCU 220 pF to 330 pF
HCZ 1.2 nF to 6.8 nF
HCE 3.3 nF to 10 nF

RELATED DOCUMENTS

General Information	www.vishay.com/doc?22001

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.