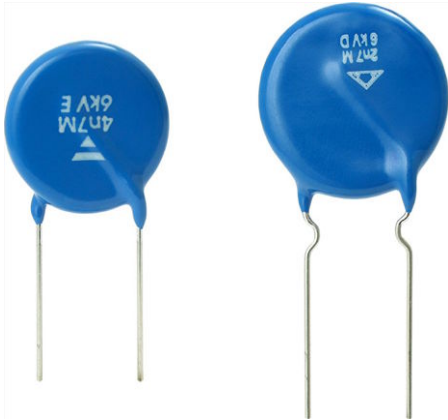


## Ceramic Singlelayer DC Disc Capacitors, 6 kV<sub>DC</sub> General Purpose



QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Ceramic Class	1                      2
Ceramic Dielectric	N750, Y5T, Y5U
Voltage (V <sub>DC</sub> )	6000
Min. Capacitance (pF)	10                      56
Max. Capacitance (pF)	330                      6800
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

**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](http://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 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 6.8 nF

**RATED VOLTAGE**

6 kV<sub>DC</sub>

**DIELECTRIC STRENGTH**

9000 V<sub>DC</sub>, 2 s    Component test

**INSULATION RESISTANCE AT 500 V<sub>DC</sub>**

≥ 10 000 MΩ (60 s)

**TOLERANCE ON CAPACITANCE**

± 10 %, ± 20 %

**DISSIPATION FACTOR**

Class 1:

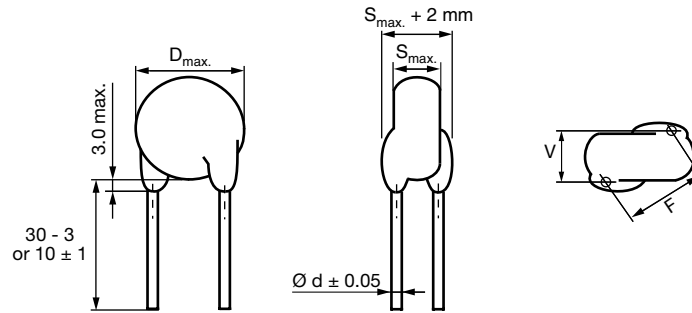
$$C < 30 \text{ pF: } \left( \frac{100 \text{ pF}}{C} + 0.7 \right) \times 10^{-4} \text{ max. (1 MHz)}$$

C ≥ 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 <sub>max.</sub> (mm)	BODY THICKNESS S <sub>max.</sub> (mm)	LEAD SPACING <sup>(1)</sup> F (mm) ± 1 mm	LEAD DIAMETER <sup>(1)</sup> d (mm) ± 0.05 mm	WIDTH <sup>(1)</sup> V (mm) ± 0.5 mm	ORDERING CODE
							MISSING DIGITS SEE ORDERING CODE BELOW
<b>N750 (U2J)</b>							
10	± 10	7.0	4.8	12.5	0.6	2.2	HFU100KBF###KR
15							HFU150KBF###KR
22							HFU220KBF###KR
33							HFU330KBF###KR
47							HFU470KBF###KR
68		12.0	5.2		0.8	2.4	HFU680KBF###KR
82							HFU820KBF###KR
100							HFU101KBF###KR
150							HFU151KBF###KR
220							HFU221KBF###KR
330	20.0	HFU331KBF###KR					
<b>Y5T (2E3)</b>							
56	± 20 <sup>(2)</sup>	7.0	5.0	12.5	0.6	3.5	HFZ560#BF###KR
68							HFZ680#BF###KR
82							HFZ820#BF###KR
100							HFZ101#BF###KR
120							HFZ121#BF###KR
150		HFZ151#BF###KR					
180		HFZ181#BF###KR					
220		HFZ221#BF###KR					
270		HFZ271#BF###KR					
330		HFZ331#BF###KR					
390		HFZ391#BF###KR					
470		HFZ471#BF###KR					
560		HFZ561#BF###KR					
680		HFZ681#BF###KR					
820		HFZ821#BF###KR					
1000		HFZ102#BF###KR					
1200		HFZ122#BF###KR					
1500		HFZ152#BF###KR					
1800		HFZ182#BF###KR					
2200		HFZ222#BF###KR					
2700	25.0	HFZ272#BF###KR					



ORDERING INFORMATION								
CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D <sub>max.</sub> (mm)	BODY THICKNESS S <sub>max.</sub> (mm)	LEAD SPACING <sup>(1)</sup> F (mm) ± 1 mm	LEAD DIAMETER <sup>(1)</sup> d (mm) ± 0.05 mm	WIDTH <sup>(1)</sup> V (mm) ± 0.5 mm	ORDERING CODE MISSING DIGITS SEE ORDERING CODE BELOW	
<b>Y5U (2E3)</b>								
150	± 20	7.0	5.0	12.5	0.6	3.5	HFE151MBF###KR	
220							HFE221MBF###KR	
330							HFE331MBF###KR	
470		9.0					HFE471MBF###KR	
680							HFE681MBF###KR	
1000							HFE102MBF###KR	
1500		13.0	HFE152MBF###KR					
2200		15.0	HFE222MBF###KR					
3300		21.0	5.5				0.8	HFE332MBF###KR
4700								HFE472MBF###KR
6800					23.0			HFE682MBF###KR
								HFE682MBF###KR

**Notes**

- <sup>(1)</sup> Standard lead configuration, other lead spacing and diameter available on request
- <sup>(2)</sup> ± 10 % available on request

ORDERING CODE							
#	7 <sup>th</sup> digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
###	10 <sup>th</sup> to 12 <sup>th</sup> digit	Lead configuration	see "General Information"				
<b>Example</b>	<b>HFE</b>	<b>682</b>	<b>M</b>	<b>BF</b>	<b>EF0</b>	<b>K</b>	<b>R</b>
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING	
HFU 10 pF to 100 pF HFZ 56 pF to 470 pF HFE 150 pF to 1.0 nF	HFU 150 pF to 330 pF HFZ 560 nF to 2.7 nF HFE 1.5 nF to 6.8 nF

RELATED DOCUMENTS	
General Information	<a href="http://www.vishay.com/doc?22001">www.vishay.com/doc?22001</a>



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