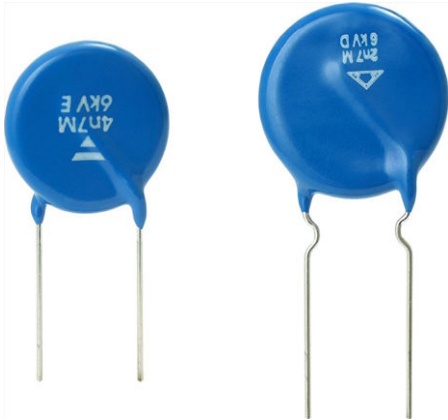


## Ceramic Singlelayer DC Disc Capacitors, 6 kV<sub>DC</sub> General Purpose



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 %

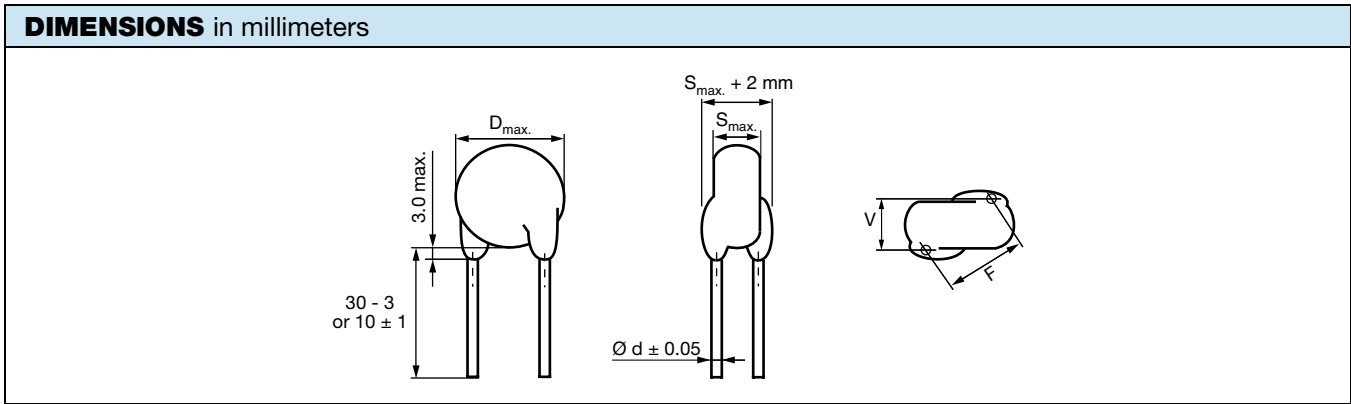
### DISSIPATION FACTOR

Class 1:

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

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

Class 2:    max. 2.5 % (1 kHz)



ORDERING INFORMATION										
CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D <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		9.5	5.2		0.8	2.4	HFU470KBF###KR			
68							HFU680KBF###KR			
82		12.0	5.2		0.8	2.4	HFU820KBF###KR			
100							HFU101KBF###KR			
150							HFU151KBF###KR			
220							HFU221KBF###KR			
330							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		8.0					5.0	0.6	3.5	HFZ101#BF###KR
120										HFZ121#BF###KR
150										HFZ151#BF###KR
180		10.0					5.0	0.6	3.5	HFZ181#BF###KR
220										HFZ221#BF###KR
270										HFZ271#BF###KR
330		12.0					5.0	0.8	3.5	HFZ331#BF###KR
390										HFZ391#BF###KR
470										HFZ471#BF###KR
560		13.0					5.0	0.8	3.5	HFZ561#BF###KR
680										HFZ681#BF###KR
820										HFZ821#BF###KR
1000		17.0			5.0	0.8	3.5	HFZ102#BF###KR		
1200								HFZ122#BF###KR		
1500								HFZ152#BF###KR		
1800		21.0			5.0	0.8	3.5	HFZ182#BF###KR		
2200								HFZ222#BF###KR		
2700								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		HFE332MBF###KR		
4700					0.8		HFE472MBF###KR
6800					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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