



**THE DATASHEET OF
HFU220KBFEF0KR**



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



QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Ceramic Class	1 2
Ceramic Dielectric	N750, Y5T, Y5U, Y5V
Voltage (V _{DC})	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

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



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 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

1000 V_{DC}

DIELECTRIC STRENGTH

1750 V_{DC}, 2 s Component test

INSULATION RESISTANCE AT 500 V_{DC}

≥ 10 000 MΩ (60 s)

TOLERANCE ON CAPACITANCE

± 10 %, ± 20 %, -20 % +50 %

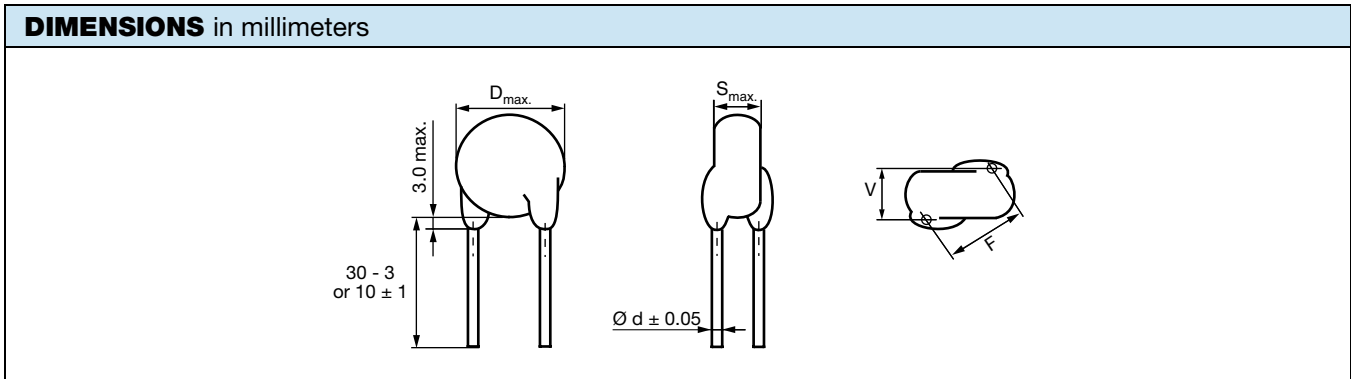
DISSIPATION FACTOR

Class 1:

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

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

Class 2: max. 2.5 % (1 kHz)



ORDERING INFORMATION								
CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D_{max} (mm)	BODY THICKNESS S_{max} (mm)	LEAD SPACING ⁽¹⁾ F (mm) $\pm 1 \text{ mm}$	LEAD DIAMETER ⁽¹⁾ d (mm) $\pm 0.05 \text{ mm}$	WIDTH ⁽¹⁾ V (mm) $\pm 0.5 \text{ mm}$	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							HAU680KBA###KR	
82		8.0	3.5	7.5	0.6	1.4	HAU820KBA###KR	
100							HAU101KBA###KR	
150							HAU151KBA###KR	
220							HAU221KBA###KR	
330							HAU331KBA###KR	
470							HAU471KBA###KR	
560		18.0	3.5	7.5	0.6	1.4	HAU561KBA###KR	
680							HAU681KBA###KR	
Y5T (2D3)								
47		$\pm 10, \pm 20$	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		3.0	7.5	0.6	1.2	HAZ102#BA###KR	
1500							HAZ152#BA###KR	
2200							HAZ222#BA###KR	
3300							HAZ332#BA###KR	
4700							HAZ472#BA###KR	
							15.0	



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		11.0					HAE222MBA###KR	
3300		13.0					HAE332MBA###KR	
4700		15.0		HAE472MBA###KR				
6800							7.5	HAE682MBA###KR
10 000								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		12.0					HAX472#BA###KR	
6800		17.0					HAX682#BA###KR	
10 000		18.0		7.5			HAX103#BA###KR	
15 000								HAX153#BA###KR
22 000								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			
 33p K 1 kV U	 ▽ n56 K	 2n2 S 1 kV	 ▽ HAX 10n S
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 10 nF to 22 nF

RELATED DOCUMENTS	
General Information	www.vishay.com/doc?22001



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