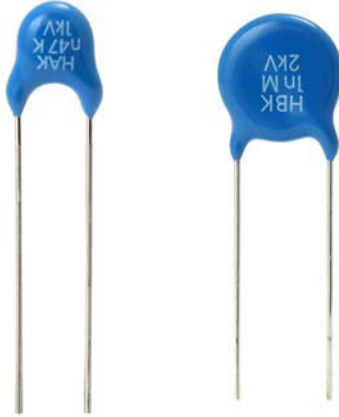


Ceramic Singlelayer DC Disc Capacitors, Class 2, Low Loss (0.5 %), 1 kV_{DC}, 2 kV_{DC}, 3 kV_{DC}


FEATURES

- Low losses
- High stability
- Low DF minimizes self heating at HF
- Ideal for switching to 100 Hz
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

In electronic circuits where low losses and high capacitance per volume are essential, for example:

- HF ballast
- SMPS
- Snubber and HV circuits

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 or 10.0 mm.

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

QUICK REFERENCE DATA			
DESCRIPTION	VALUE		
Ceramic Class	2		
Ceramic Dielectric	Y5S		
Voltage (V _p)	1000	2000	3000
Min. Capacitance (pF)	100	100	100
Max. Capacitance (pF)	4700	4700	3300
Mounting	Radial		

MARKING

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

OPERATING TEMPERATURE RANGE

- 40 °C to + 125 °C

TEMPERATURE CHARACTERISTICS

Y5S (2C3)

SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60068-1):

40/125/21

APPROVALS

IEC 60384-9, EIA 198

CAPACITANCE RANGE

100 pF to 4700 pF

RATED DC VOLTAGE

- 1 kV_{DC}
- 2 kV_{DC}
- 3 kV_{DC}

DIELECTRIC STRENGTH

- 2000 V_{AC}, 50 Hz, 2 s Component test
- 3000 V_{AC}, 50 Hz, 2 s
- 4000 V_{AC}, 50 Hz, 2 s

INSULATION RESISTANCE AT 500 V_{DC}

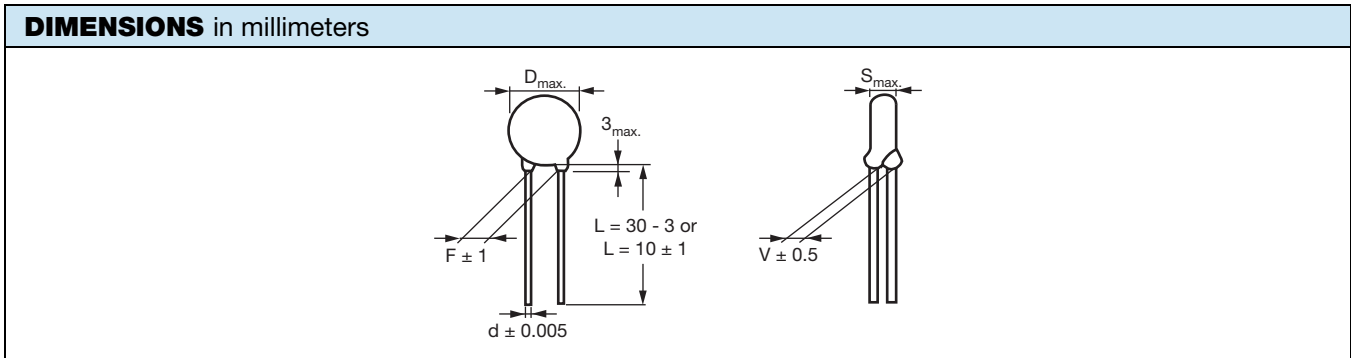
≥ 10 000 MΩ (60 s)

TOLERANCE ON CAPACITANCE

± 20 % (± 10 % available on request)

DISSIPATION FACTOR

Max. 0.5 % (1 kHz)



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
1 kV							
100	± 20 ⁽²⁾	7.0	5.0	7.5	0.6	1.1	HAK101.BA...KR
150							HAK151.BA...KR
220							HAK221.BA...KR
270							HAK271.BA...KR
330							HAK331.BA...KR
390							HAK391.BA...KR
470							HAK471.BA...KR
560							HAK561.BA...KR
680		8.0					HAK681.BA...KR
820							
1000		10.0					HAK102.BA...KR
1200							
1500		12.0					HAK152.BA...KR
1800							
2200		15.5					HAK222.BA...KR
2700							
3300		HAK332.BA...KR					
3900							HAK392.BA...KR
4700	HAK472.BA...KR						
2 kV							
100	± 20 ⁽²⁾	7.0	5.0	7.5	0.6	1.6	HBK101.BB...KR
150							HBK151.BB...KR
220							HBK221.BB...KR
270							HBK271.BB...KR
330							HBK331.BB...KR
390		8.0					HBK391.BB...KR
470							
560		10.0					HBK561.BB...KR
680							
820		12.5					HBK821.BB...KR
1000	14.5		HBK102.BB...KR				
1200		16.5		HBK122.BB...KR			
1500	17.5		HBK152.BB...KR				
1800		19.5		HBK182.BB...KR			
2200	25.5		HBK222.BB...KR				
2700		HBK272.BB...KR					
3300	HBK332.BB...KR						
3900		HBK392.BB...KR					
4700	HBK472.BB...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
3 kV							
100	± 20 ⁽²⁾	7.0	5.0	10.0	0.6	1.6	HCK101.BC...KR
150							HCK151.BC...KR
220							HCK221.BC...KR
270		HCK271.BC...KR					
330		8.0					HCK331.BC...KR
390		9.0					HCK391.BC...KR
470		HCK471.BC...KR					
560		10.0					HCK561.BC...KR
680		11.0					HCK681.BC...KR
820		12.0					HCK821.BC...KR
1000		13.0					HCK102.BC...KR
1200		15.0					HCK122.BC...KR
1500		16.0					HCK152.BC...KR
1800		17.0					HCK182.BC...KR
2200		18.0					HCK222.BC...KR
2700		20.0					HCK272.BC...KR
3300							HCK332.BC...KR

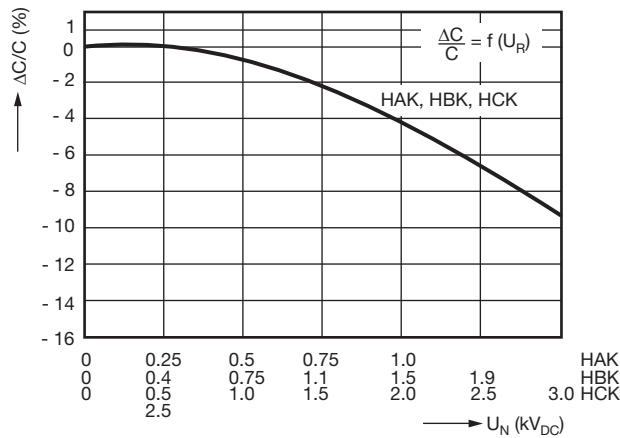
Notes

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

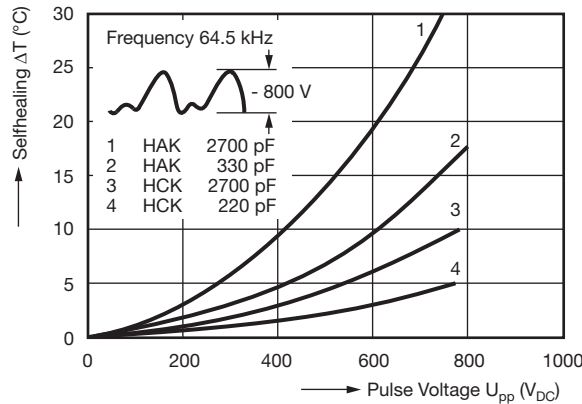
ORDERING CODE							
.	7 th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
...	10 th to 12 th digit	Lead configuration	see "General Information"				
Example	HCK	02	M	BC	DF0	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING	
<p>HBK n47 M 2 kV D_{max.} ≤ 10 mm</p>	<p>HBK 1n5 M D_{max.} ≥ 11 mm</p>

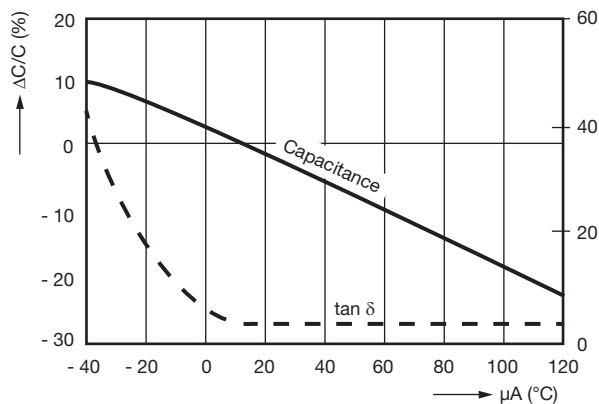
CAPACITANCE CHANGE VS. VOLTAGE



SELF HEATING



CAPACITANCE CHANGE AND DISSIPATION FACTOR VS. TEMPERATURE



RELATED DOCUMENTS

General Information

www.vishay.com/doc?22001



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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.

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