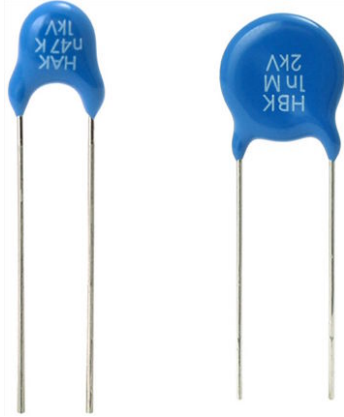


Ceramic Singlelayer DC Disc Capacitors, Class 2, Low Loss (0.5 %), 1 kV_{DC}, 2 kV_{DC}, 3 kV_{DC}


FEATURES

- Low losses
- High stability
- Low DF minimizes self heating at HF
- Ideal for switching to 100 kHz
- 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 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 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 _{DC})	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}

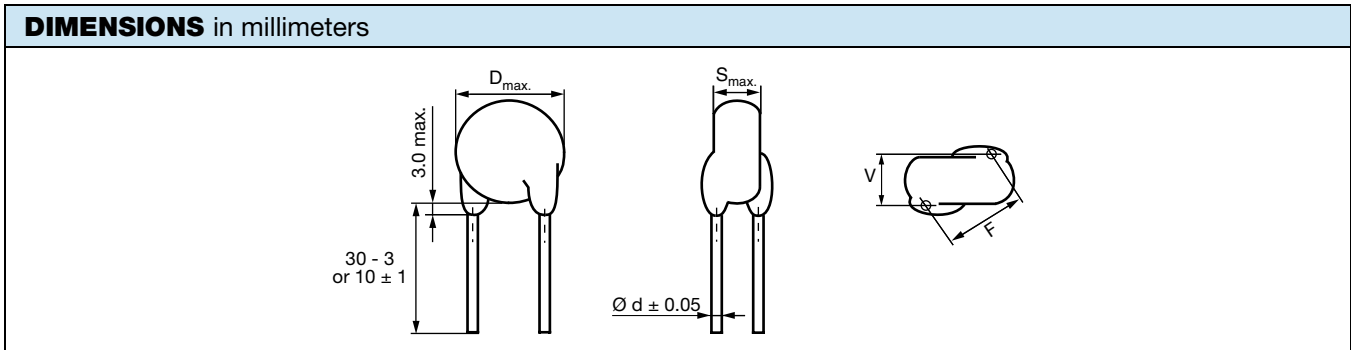
≥ 10 000 MΩ (60 s)

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) $\pm 1 \text{ mm}$	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					
1 kV_{DC}												
100	$\pm 20^{(2)}$	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					10.0	11.0	12.0	14.5	15.5	HAK681#BA###KR
820												HAK821#BA###KR
1000												HAK102#BA###KR
1200												HAK122#BA###KR
1500												HAK152#BA###KR
1800												HAK182#BA###KR
2200												HAK222#BA###KR
2700												HAK272#BA###KR
3300												HAK332#BA###KR
3900												HAK392#BA###KR
4700	15.5	16.5	16.5	16.5	16.5	16.5	HAK472#BA###KR					
4700							HAK472#BA###KR					
2 kV_{DC}												
100	$\pm 20^{(2)}$	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							HBK391#BB###KR					
470							HBK471#BB###KR					
560							HBK561#BB###KR					
680		8.0					10.0	11.0	12.5	14.5	17.5	HBK681#BB###KR
820												HBK821#BB###KR
1000												HBK102#BB###KR
1200												HBK122#BB###KR
1500												HBK152#BB###KR
1800												HBK182#BB###KR
2200												HBK222#BB###KR
2700												HBK272#BB###KR
3300												HBK332#BB###KR
3900												HBK392#BB###KR
4700	17.5	19.5	19.5	19.5	19.5	19.5	HBK472#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_{DC}							
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		10.0					HCK471#BC###KR
560							HCK561#BC###KR
680							HCK681#BC###KR
820		11.0					HCK821#BC###KR
1000		12.0					HCK102#BC###KR
1200		13.0					HCK122#BC###KR
1500		15.0					HCK152#BC###KR
1800		16.0					HCK182#BC###KR
2200		17.0					HCK222#BC###KR
2700		18.0					HCK272#BC###KR
3300		20.0					HCK332#BC###KR

Notes

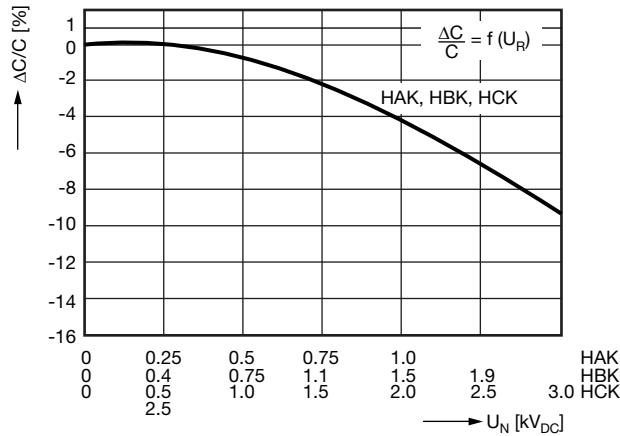
⁽¹⁾ Standard lead configuration, other lead spacing and diameter available on request

⁽²⁾ ± 10 % available on request

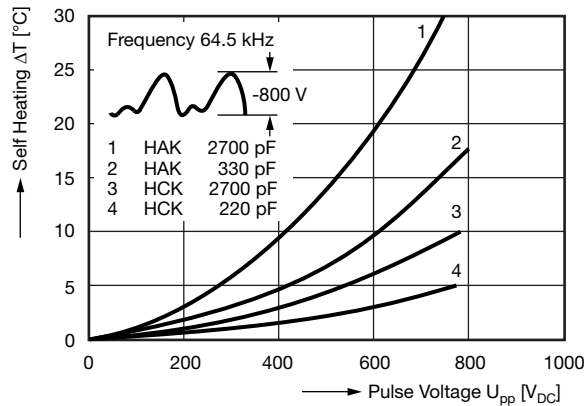
ORDERING CODE							
#	7 th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
###	10 th to 12 th digit	Lead configuration	see "General Information"				
Example	HCK	02	M	BC	DF0	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING	
<p>D_{max.} ≤ 10 mm</p>	<p>D_{max.} ≥ 11 mm</p>

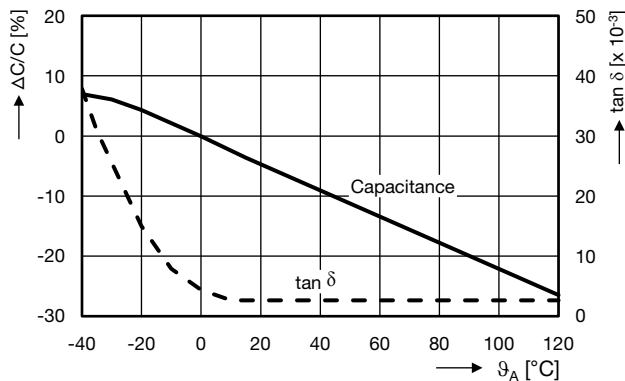
CAPACITANCE CHANGE VS. VOLTAGE (Typical)



SELF HEATING (Typical)



CAPACITANCE CHANGE AND DISSIPATION FACTOR VS. TEMPERATURE (Typical)



RELATED DOCUMENTS

General Information

www.vishay.com/doc?222001



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