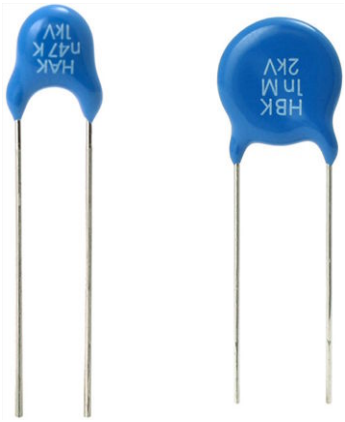
Ceramic Singlelayer DC Disc Capacitors, Class 2, Low Loss (0.5 %), 1 kV_{DC}, 2 kV_{DC}, 3 kV_{DC}



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

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

Pb e3 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.

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)

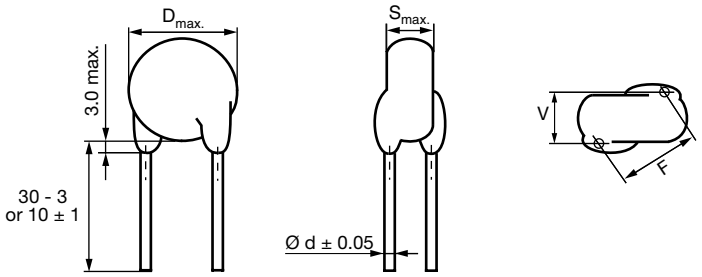
TOLERANCE ON CAPACITANCE

± 20 % (± 10 % available on request)

DISSIPATION FACTOR

Max. 0.5 % (1 kHz)

DIMENSIONS in millimeters



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		8.0					HAK561.BA...KR
680							HAK681.BA...KR
820		9.0					HAK821.BA...KR
1000							HAK102.BA...KR
1200		10.0					HAK122.BA...KR
1500		11.0					HAK152.BA...KR
1800		12.0					HAK182.BA...KR
2200							HAK222.BA...KR
2700		14.5					HAK272.BA...KR
3300							HAK332.BA...KR
3900		15.5					HAK392.BA...KR
4700		16.5					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							HBK471.BB...KR
560		9.0					HBK561.BB...KR
680							HBK681.BB...KR
820		10.0					HBK821.BB...KR
1000	± 20 (2)	11.0	5.0	7.5	0.6	1.6	HBK102.BB...KR
1200							HBK122.BB...KR
1500		12.5					HBK152.BB...KR
1800		14.5					HBK182.BB...KR
2200							HBK222.BB...KR
2700		16.5					HBK272.BB...KR
3300		17.5					HBK332.BB...KR
3900		19.5					HBK392.BB...KR
4700		25.5					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							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

.	7th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M
...	10th to 12th digit	Lead configuration	see “General Information”

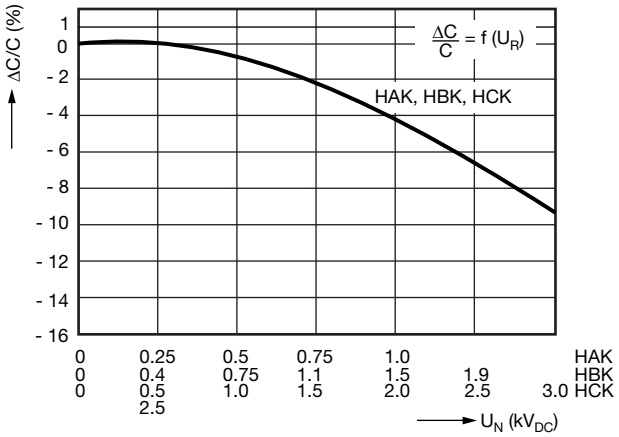
Example	HCK	02	M	BC	DF0	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING

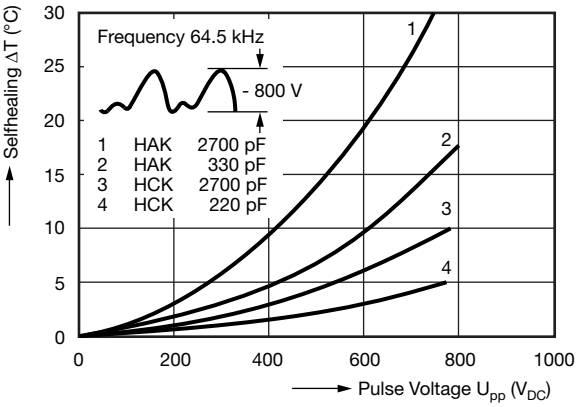
$D_{max.} \leq 10$ mm

$D_{max.} \geq 11$ mm

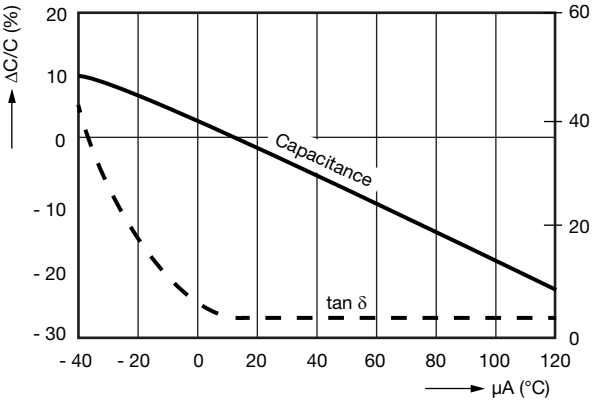
CAPACITANCE CHANGE VS. VOLTAGE



SELF HEATING



CAPACITANCE CHANGE AND DISSIPATION FACTOR VS. TEMPERATURE



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

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