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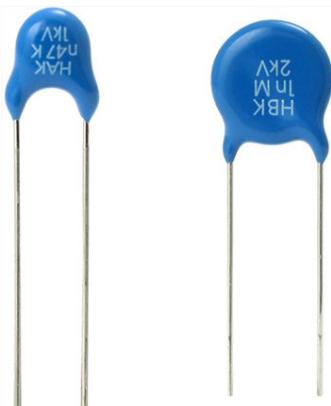
[Vishay/BCcomponents](#)
[HAK102KBABF0KR](#)

For any questions, you can email us directly:

sales@integrated-circuit.com



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 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.

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)

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

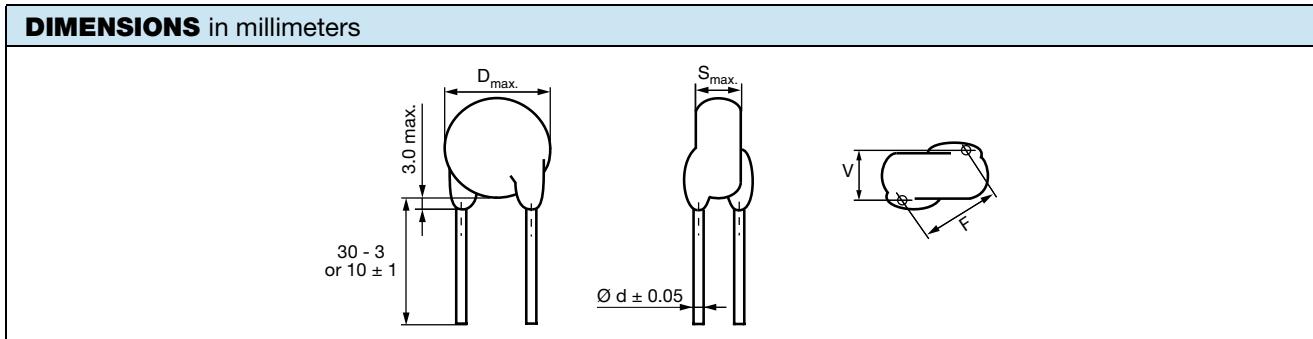
Y5S (2C3)

SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60068-1):
40/125/21

APPROVALS

IEC 60384-9, EIA 198



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_{DC}							
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	5.0	7.5	0.6	1.1	HAK561#BA###KR
680							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	± 20 ⁽²⁾	9.0	5.0	7.5	0.6	1.1	HAK272#BA###KR
3300							HAK332#BA###KR
3900							HAK392#BA###KR
4700							HAK472#BA###KR
2 kV _{DC}		10.0	5.0	7.5	0.6	1.6	HBK101#BB###KR
100							HBK151#BB###KR
150							HBK221#BB###KR
220							HBK271#BB###KR
270							HBK331#BB###KR
330							HBK391#BB###KR
390							HBK471#BB###KR
470							HBK561#BB###KR
560							HBK681#BB###KR
680							HBK821#BB###KR
820							HBK102#BB###KR
1000							HBK122#BB###KR
1200							HBK152#BB###KR
1500							HBK182#BB###KR
1800							HBK222#BB###KR
2200							HBK272#BB###KR
2700							HBK332#BB###KR
3300							HBK392#BB###KR
3900							HBK472#BB###KR
4700							HBK561#BB###KR

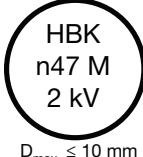
ORDERING INFORMATION							
CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER $D_{max.}$ (mm)	BODY THICKNESS $S_{max.}$ (mm)	LEAD SPACING ⁽¹⁾ F (mm) ± 1 mm	LEAD DIAMETER ⁽¹⁾ d (mm) ± 0.05 mm	WIDTH ⁽¹⁾ V (mm) ± 0.5 mm	ORDERING CODE
							MISSING DIGITS SEE ORDERING CODE BELOW
3 kV_{DC}							
100							HCK101#BC###KR
150							HCK151#BC###KR
220							HCK221#BC###KR
270							HCK271#BC###KR
330							HCK331#BC###KR
390							HCK391#BC###KR
470							HCK471#BC###KR
560							HCK561#BC###KR
680							HCK681#BC###KR
820							HCK821#BC###KR
1000							HCK102#BC###KR
1200							HCK122#BC###KR
1500							HCK152#BC###KR
1800							HCK182#BC###KR
2200							HCK222#BC###KR
2700							HCK272#BC###KR
3300							HCK332#BC###KR

Notes

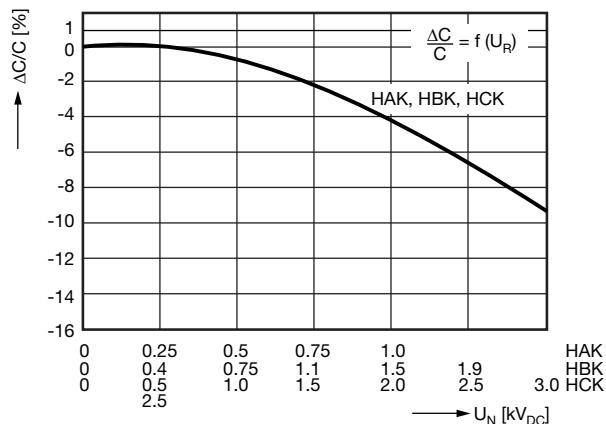
(1) Standard lead configuration, other lead spacing and diameter available on request

(2) $\pm 10\%$ available on request

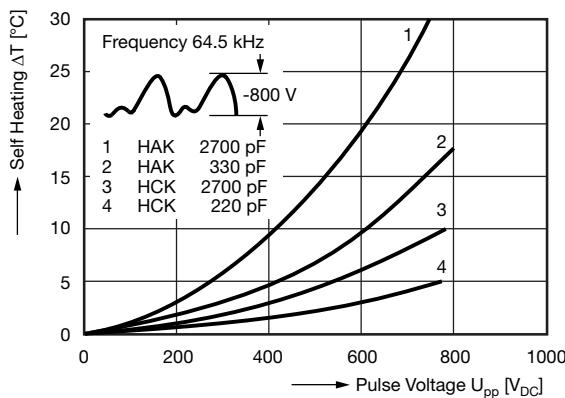
ORDERING CODE							
#	7 th digit	Capacitance tolerance	$\pm 10\% = K, \pm 20\% = M$				
###	10 th to 12 th digit	Lead configuration	see "General Information"				
Example	HCK	02	M	BC	DF0	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING							
 $D_{max.} \leq 10 \text{ mm}$				 $D_{max.} \geq 11 \text{ mm}$			

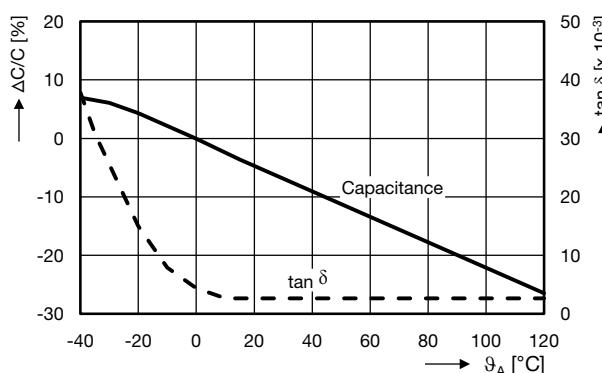
CAPACITANCE CHANGE VS. VOLTAGE (Typical)



SELF HEATING (Typical)



CAPACITANCE CHANGE AND DISSIPATION FACTOR VS. TEMPERATURE (Typical)



RELATED DOCUMENTS

General Information

www.vishay.com/doc?22001

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Vishay

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