

## High Voltage Disc Capacitors, 20 kV<sub>DC</sub> Screw Mounting, Class 2 Ceramic



QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Type	HPC   HPD
Ceramic Class	2
Ceramic Dielectric	R2000H
Voltage (V <sub>p</sub> )	20 000
Min. Capacitance (pF)	350
Max. Capacitance (pF)	5000
Mounting	Screw mounting

### MATERIAL

Capacitor elements made from class 2 ceramic dielectric with noble metal electrodes.

Connection terminals: thread terminal, brass, silver plated

Allowable torque: 5.0 Nm (44 lbf · in)

### FINISH

The capacitor body of the HPD type is completely protective lacquered. The HPC type feature a coating made from silicone elastomer to minimize the adverse effect of moisture, dust and other impurities in the working environment.

### MARKING

Capacitance value and tolerance, manufacturer logo.

### FEATURES

- High reliability
- Wide range of capacitance values

### APPLICATIONS

HPC and HPD high voltage capacitors made from class 2-ceramic dielectric can be used as coupling and bypass capacitors where low power ratings are required and larger capacitance changes with temperature can be tolerated.

### CAPACITANCE RANGE

350 pF to 5.0 nF

### CAPACITANCE TOLERANCE

± 20 %

### CERAMIC DIELECTRIC

R2000H (Z5U)

### RATED VOLTAGE

20 kV<sub>DC</sub> or 15 kV<sub>RMS</sub> (up to 120 Hz)

### DIELECTRIC STRENGTH TEST

25 kV<sub>RMS</sub>, 50 Hz, 5 minutes

### DISSIPATION FACTOR

Max. 0.5 % (1 MHz)

### INSULATION RESISTANCE

Min. 50 000 MΩ (at 25 °C)

### OPERATING TEMPERATURE RANGE

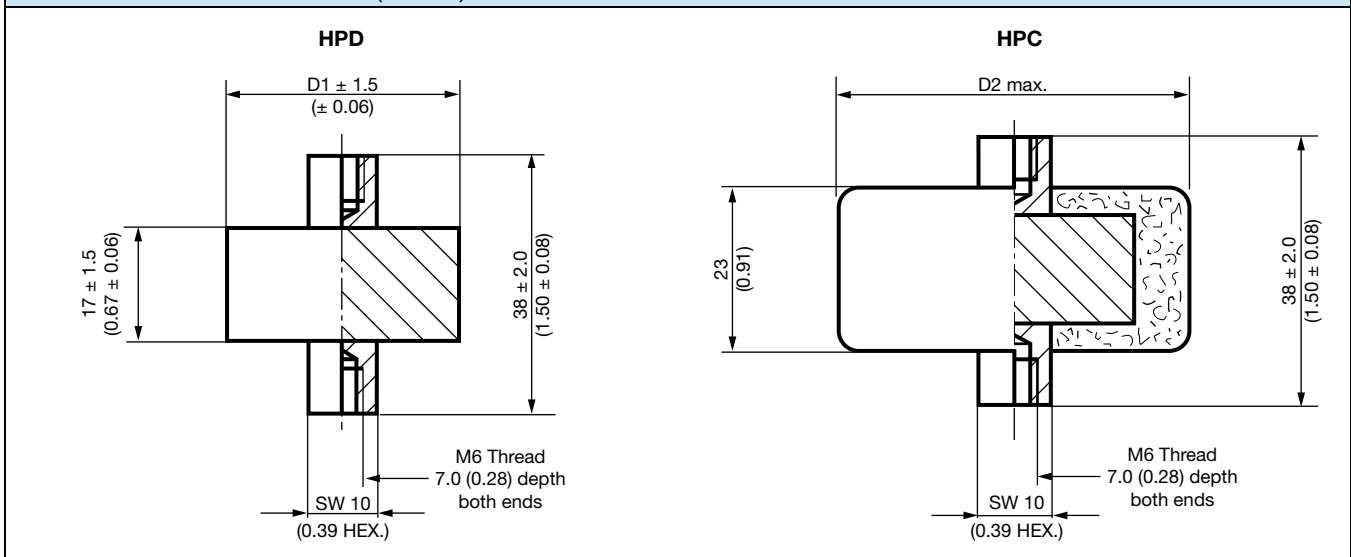
-25 °C to +85 °C

**SAP PART NUMBER, ELECTRICAL AND DIMENSIONAL DATA**

PART NUMBER	CERAMIC	CAPACITANCE VALUES (pF)	RATED VOLTAGE <sup>(1)</sup> (kV <sub>DC</sub> )	RATED VOLTAGE <sup>(1)</sup> (kV <sub>AC</sub> )	RATED RF-CURRENT <sup>(2)</sup> (A <sub>RMS</sub> )	D <sub>1</sub> mm (inch)	D <sub>2</sub> max. mm (inch)
<b>TYPE HPC</b>							
HPC050WP35138AX1	R2000H (Z5U)	350	20	(15 kV <sub>RMS</sub> up to 120 Hz)	6.0 max.		50 (1.97)
HPC050WP50138AX1		500					
HPC050WP75138AX1		750					
HPC050WP10238AX1		1000					
HPC060WP15238AX1		1500					60 (2.36)
HPC060WP20238AX1		2000					
HPC070WP30238AX1		3000					
HPC090WP50238AX1		5000					
<b>TYPE HPD</b>							
HPD021WP35138AX1	R2000H (Z5U)	350	20	(15 kV <sub>RMS</sub> up to 120 Hz)	6.0 max.	21 (0.83)	
HPD025WP50138AX1		500				25 (0.98)	
HPD030WP75138AX1		750				30 (1.18)	
HPD035WP10238AX1		1000				35 (1.38)	
HPD043WP15238AX1		1500				43 (1.69)	
HPD050WP20238AX1		2000				50 (1.97)	
HPD059WP30238AX1		3000				59 (2.32)	
HPD075WP50238AX1		5000				75 (2.95)	

**Notes**

- (1) The type HPD must be operated in a high insulation environment, e.g. oil or inert gas. When operate this type in free air the rated voltage must be reduced to 7.0 kV<sub>DC</sub>.
- (2) To an max. ambient temperature +60 °C

**DIMENSIONS in millimeters (inches)**


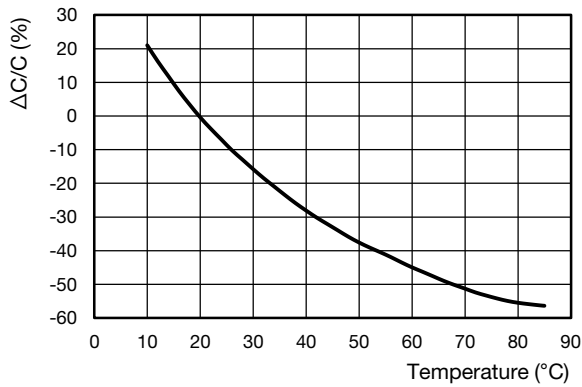


**MOUNTING GUIDELINES**

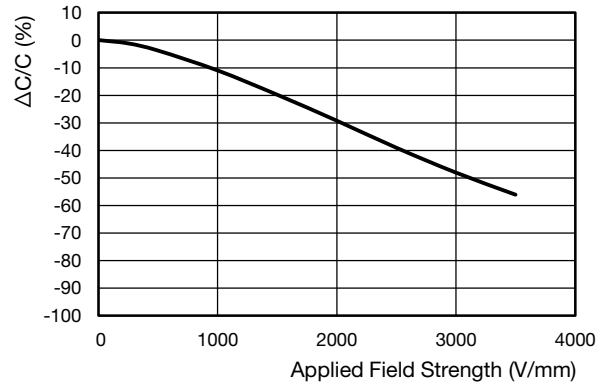
- Avoid installation in which too much torque is applied to the capacitor elements. Screw torque limit must be 5.0 Nm (44 lbf · in.)
- Do not use screws whose thread is longer than specified in the datasheet
- The capacitor elements must not be used as a mechanical support for other devices or components

**CERAMIC CHARACTERISTICS (TYPICAL)**

**CAPACITANCE CHANGE VS. TEMPERATURE**



**DC VOLTAGE DEPENDENCE OF CAPACITANCE**



**RELATED DOCUMENTS**

General Information

[www.vishay.com/doc?22071](http://www.vishay.com/doc?22071)



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