

High Voltage Disc Capacitors, 20 kV_{DC} Screw Mounting, Class 2 Ceramic



QUICK REFERENCE DATA

| DESCRIPTION | VALUE | |
|---------------------------|----------------|-----|
| Type | HPC | HPD |
| Ceramic Class | 2 | |
| Ceramic Dielectric | R2000H | |
| Voltage (V _p) | 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_{DC} or 15 kV_{RMS} (up to 120 Hz)

DIELECTRIC STRENGTH TEST

25 kV_{RMS}, 50 Hz, 5 minutes

DISSIPATION FACTOR

Max. 0.5 % (1 MHz)

INSULATION RESISTANCE

Min. 50 000 MΩ (at 25 °C)

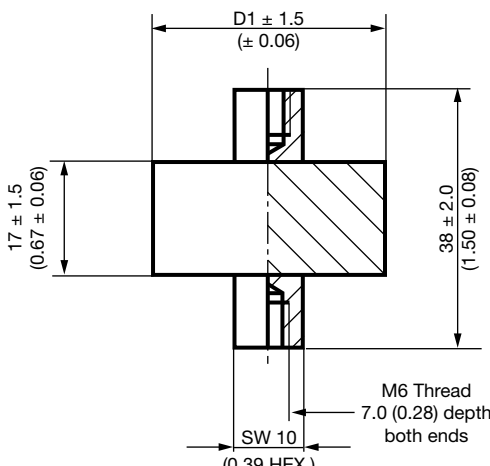
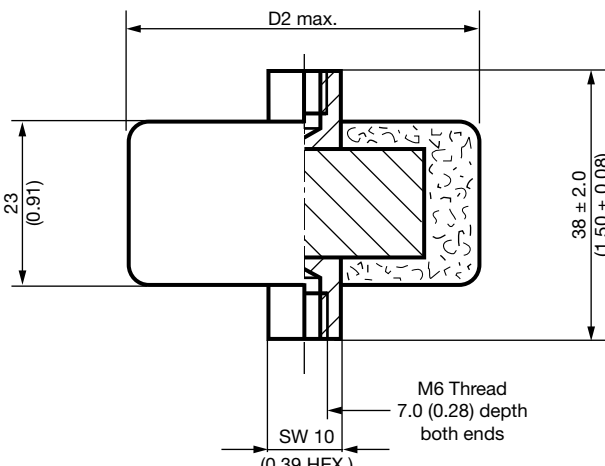
OPERATING TEMPERATURE RANGE

-25 °C to +85 °C

| SAP PART NUMBER, ELECTRICAL AND DIMENSIONAL DATA | | | | | | | |
|--|--------------|-------------------------------|--|--|---|--------------------------------|-------------------------------------|
| PART NUMBER | CERAMIC | CAPACITANCE VALUES (pF) | RATED VOLTAGE ⁽¹⁾ (kV _{DC}) | RATED VOLTAGE ⁽¹⁾ (kV _{AC}) | RATED RF-CURRENT ⁽²⁾ (A _{RMS}) | D ₁ mm (inch) | D ₂ max. mm (inch) |
| TYPE HPC | | | | | | | |
| HPC050WP35138AX1 | R2000H (Z5U) | 350 | 20 | (15 kV _{RMS} 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 | | | | | |
| TYPE HPD | | | | | | | |
| HPD021WP35138AX1 | R2000H (Z5U) | 350 | 20 | (15 kV _{RMS} 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_{DC}.
- (2) To an max. ambient temperature +60 °C

| DIMENSIONS in millimeters (inches) | |
|---|--|
| <p>HPD</p>  | <p>HPC</p>  |

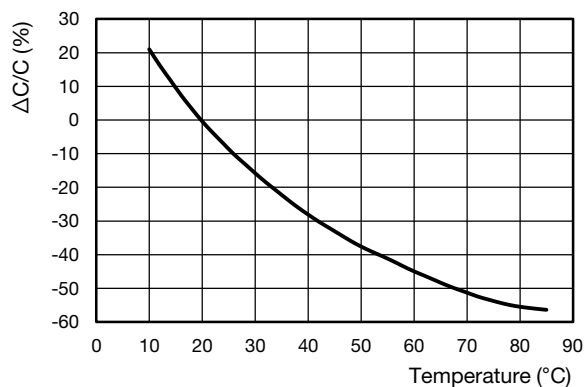


MOUNTING GUIDELINES

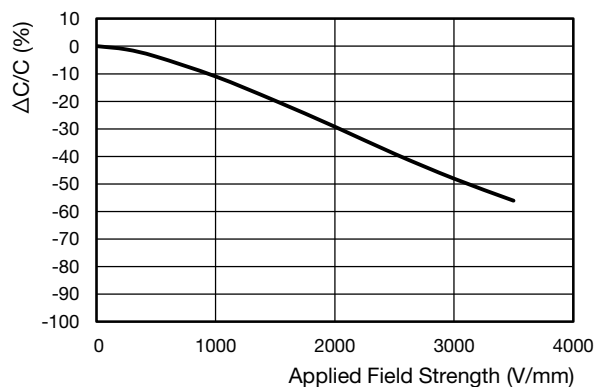
- Avoid installation in which too much torque is applied to the capacitor elements. Screw torque limit must be 5.0 Nm (44 lbf · in.)
- Do not use screws whose thread is longer than specified in the datasheet
- The capacitor elements must not be used as a mechanical support for other devices or components

CERAMIC CHARACTERISTICS (TYPICAL)

CAPACITANCE CHANGE VS. TEMPERATURE



DC VOLTAGE DEPENDENCE OF CAPACITANCE



RELATED DOCUMENTS

General Information

www.vishay.com/doc?22071



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