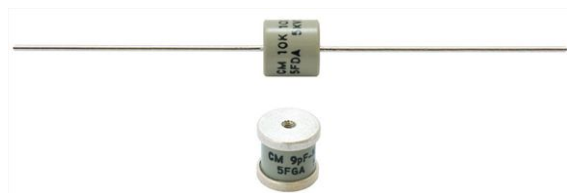


## RF Power Barrel Capacitors, Class 1 Ceramic



### QUICK REFERENCE DATA

| DESCRIPTION           | VALUE                                    |                                          |
|-----------------------|------------------------------------------|------------------------------------------|
| Ceramic Class         | 1                                        | 1                                        |
| Ceramic Dielectric    | NP0 (C0G)                                | N750 (U2J)                               |
| Type                  | 5FCA, 5FDA,<br>5FEA, 5FFA,<br>5FGA, 5FHA | 5FCU, 5FDU,<br>5FEP, 5FFU,<br>5FGU, 5FHU |
| Voltage ( $V_{DC}$ )  | 5000                                     | 5000                                     |
| Min. Capacitance (pF) | 3.0                                      | 10                                       |
| Max. Capacitance (pF) | 20                                       | 40                                       |
| Mounting              | Axial or screw terminal                  |                                          |

### MATERIAL

Capacitor elements made from class 1 ceramic dielectric with noble metal electrodes.

Connection terminals:

- Axial wire leads, tinned copper (style FC., FD., FE.)
- Thread terminal, brass, silver plated (style FF., FG., FH.)

Allowable torque: 0.34 Nm (3.0 lbf in)

### FINISH

Capacitor body completely protective lacquered.

### MARKING

Type designator, capacitance value and tolerance, rated peak voltage, ceramic material code, production date code, manufacturer logo.

### FEATURES

- Very small size make it well suited in mobile equipment
- Geometry minimizes inductance, optimizes voltage withstand and maximizes heat radiation
- Available with thread terminals or solderable wire leads

### APPLICATIONS

- Radio communication equipment
- Small broadcasting equipment
- RF power supply

### CAPACITANCE RANGE

3.0 pF to 40 pF

### CAPACITANCE TOLERANCE

< 5 pF:  $\pm 0.25$  pF;  $\pm 0.5$  pF

$\geq 5$  pF:  $\pm 10$  %;  $\pm 5$  %

### CERAMIC DIELECTRICS

- NP0 (C0G)
- N750 (U2J)

### RATED VOLTAGE

5.0 kV<sub>DC</sub>

### DIELECTRIC STRENGTH TEST

150 % of rated DC voltage

### DISSIPATION FACTOR

Max. 0.2 % (1 MHz)

### INSULATION RESISTANCE

Min. 100 000 M $\Omega$  (at 25 °C)

### OPERATING TEMPERATURE RANGE

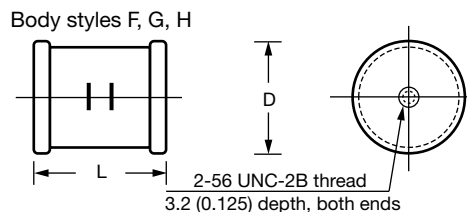
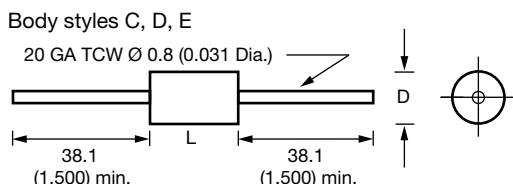
-55 °C to +100 °C

**SAP PART NUMBER AND ELECTRICAL DATA**

| PART NUMBER           | CERAMIC    | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>DC</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub>RMS</sub> ) |
|-----------------------|------------|------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| TYPE 5FCA, 5DA, 5FEA  |            |                  |                                   |                                   |                                   |
| 5FCA3R0#              | NP0 (C0G)  | 3.0              | 5.0                               | 2.3                               | 1.5                               |
| 5FCA5R0#              |            | 5.0              |                                   | 3.8                               | 1.6                               |
| 5FDA100#              |            | 10               |                                   | 4.2                               | 2.3                               |
| 5FEA200#              |            | 20               |                                   | 7.6                               | 3.4                               |
| TYPE 5FCU, 5DU, 5FEU  |            |                  |                                   |                                   |                                   |
| 5FCU100#              | N750 (U2J) | 10               | 5.0                               | 2.3                               | 1.5                               |
| 5FDU200#              |            | 20               |                                   | 3.8                               | 1.6                               |
| 5FEU300#              |            | 30               |                                   | 4.0                               | 2.0                               |
| 5FEU400#              |            | 40               |                                   | 4.2                               | 2.3                               |
| TYPE 5FFA, 5FGA, 5FHA |            |                  |                                   |                                   |                                   |
| 5FFA3R0#              | NP0 (C0G)  | 3.0              | 5.0                               | 2.3                               | 1.5                               |
| 5FFA5R0#              |            | 5.0              |                                   | 3.8                               | 1.6                               |
| 5FGA100#              |            | 10               |                                   | 4.2                               | 2.3                               |
| 5FHA200#              |            | 20               |                                   | 7.6                               | 3.4                               |
| TYPE 5FFU, 5GU, 5FHU  |            |                  |                                   |                                   |                                   |
| 5FFU100#              | N750 (U2J) | 10               | 5.0                               | 2.3                               | 1.5                               |
| 5FGU200#              |            | 20               |                                   | 3.8                               | 1.6                               |
| 5FHU400#              |            | 40               |                                   | 4.2                               | 2.3                               |

**Notes**

- # 8<sup>th</sup> digit of the part number: capacitance tolerance code  $\pm 0.25$  pF = C,  $\pm 0.5$  pF = D,  $\pm 5$  % = J,  $\pm 10$  % = K
- (1) At rated voltage. Data presented is based on a minimum body temperature rise of 30 °C at +25 °C

**DIMENSIONS in millimeters (inches)**


| PART NUMBER           | BODY STYLE | DIAMETER D<br>± 0.8 (± 0.031)<br>mm (inches) | LENGTH L<br>± 0.8 (± 0.031)<br>mm (inches) |
|-----------------------|------------|----------------------------------------------|--------------------------------------------|
| TYPE 5FCA, 5DA, 5FEA  |            |                                              |                                            |
| 5FCA3R0#              | C          | 6.4 (0.250)                                  | 8.7 (0.343)                                |
| 5FCA5R0#              |            |                                              |                                            |
| 5FDA100#              | D          | 9.5 (0.375)                                  | 9.5 (0.375)                                |
| 5FEA200#              | E          | 12.7 (0.500)                                 | 11.1 (0.437)                               |
| TYPE 5FCU, 5DU, 5FEU  |            |                                              |                                            |
| 5FCU100#              | C          | 6.4 (0.250)                                  | 8.7 (0.343)                                |
| 5FDU200#              | D          | 9.5 (0.375)                                  | 9.5 (0.375)                                |
| 5FEU300#              | E          | 12.7 (0.500)                                 | 11.1 (0.437)                               |
| 5FEU400#              |            |                                              |                                            |
| TYPE 5FFA, 5FGA, 5FHA |            |                                              |                                            |
| 5FFA3R0#              | F          | 7.9 (0.312)                                  | 9.9 (0.390)                                |
| 5FFA5R0#              |            |                                              |                                            |
| 5FGA100#              | G          | 11.1 (0.437)                                 | 10.7 (0.422)                               |
| 5FHA200#              | H          | 14.3 (0.562)                                 | 12.3 (0.484)                               |
| TYPE 5FFU, 5GU, 5FHU  |            |                                              |                                            |
| 5FFU100#              | F          | 7.9 (0.312)                                  | 9.9 (0.390)                                |
| 5FGU200#              | G          | 11.1 (0.437)                                 | 10.7 (0.422)                               |
| 5FHU400#              | H          | 14.3 (0.562)                                 | 12.3 (0.484)                               |

**RELATED DOCUMENTS**

|                     |                                                                        |
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| General Information | <a href="http://www.vishay.com/doc?22071">www.vishay.com/doc?22071</a> |
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