

## Lower Voltage Ceramic DC Disc Capacitors 1000 V<sub>DC</sub> Precision Capacitors


**RoHS**  
COMPLIANT

**FEATURES**

- Ultra stable over temperature and voltage
- Used when the ultimate in stability is required
- Radial leads
- Ceramic singlelayer capacitor
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

**APPLICATIONS**

- Temperature compensating
- Resonant circuit

**DESIGN**

The capacitors consist of a ceramic disc of which both sides are silver-plated. Connection leads are made of tinned copper or tinned copper clad steel having diameters of 0.020" (0.51 mm) or 0.025" (0.64 mm).

The capacitors may be supplied with radial kinked or straight leads having lead spacing of 0.250" (6.35 mm) or 0.375" (9.5 mm).

Coating is made of flame retardant epoxy resin in accordance with "UL 94 V-0".

| QUICK REFERENCE DATA       |        |     |     |     |     |
|----------------------------|--------|-----|-----|-----|-----|
| DESCRIPTION                | VALUE  |     |     |     |     |
| Ceramic Class              | 1      |     |     |     |     |
| Ceramic Dielectric         | C0K    | C0G | U2J | M3K | S3N |
| Voltage (V <sub>AC</sub> ) | 1000   |     |     |     |     |
| Min. Capacitance (pF)      | 1.0    | 3.0 | 33  | 560 | 680 |
| Max. Capacitance (pF)      | 2.7    | 270 | 68  | 560 | 680 |
| Mounting                   | Radial |     |     |     |     |

**INSULATION RESISTANCE**

Min. 1000 ΩF or 50 000 MΩ

**TOLERANCE ON CAPACITANCE**

± 5 %

**DISSIPATION FACTOR**

0.1 % max. at 1 MHz; 1 V

**CATEGORY TEMPERATURE RANGE**

(- 55 to + 125) °C

**CLIMATIC CATEGORY ACC. TO EN 60068-1**

55/125/21

**OPERATING TEMPERATURE RANGE**

(- 55 to + 105) °C

**CAPACITANCE RANGE**

1.0 pF to 680 pF

**RATED VOLTAGE**

 1000 V<sub>DC</sub>
**DIELECTRIC STRENGTH BETWEEN LEADS**

Component test:

 2500 V<sub>DC</sub>, 2 s

**CERAMIC DIELECTRIC**

C0K, C0G, U2J, M3K, S3N (Class 1)

| DIMENSIONS in inches (millimeters) |                 |
|------------------------------------|-----------------|
|                                    |                 |
| <b>LEAD OFFSET "LO" (nominal)</b>  |                 |
| 1000 V <sub>DC</sub>               | 0.050" (1.3 mm) |

| ORDERING INFORMATION, CERAMIC 1000 V <sub>DC</sub> PRECISION CAPACITORS |          |                      |                       |                         |           |              |      |               |
|---|----------|----------------------|-----------------------|-------------------------|-----------|--------------|------|---------------|
| C (pF)  | TOL.     | D DIAMETER INCH (mm) | T THICKNESS INCH (mm) | LS LEAD SPACE INCH (mm) | WIRE SIZE |              | FIG. | ORDERING CODE |
|   |          |                      |                       |                         | AWG       | INCH (mm)    |      |               |
| <b>C0K (P100)</b>   |          |                      |                       |                         |           |              |      |               |
| 1.0   | ± 0.5 pF | 0.250 (6.4)          | 0.156 (4.0)           | 0.250 (6.4)             | 24        | 0.020 (0.51) | 2    | 561R10TCCV10  |
| 2.2   |          |                      |                       |                         |           |              |      | 561R10TCCV22  |
| 2.7   |          |                      |                       |                         |           |              |      | 561R10TCCV27  |
| <b>C0G (NP0)</b>  |          |                      |                       |                         |           |              |      |               |
| 3.0   | ± 0.5 pF | 0.250 (6.4)          | 0.156 (4.0)           | 0.250 (6.4)             | 24        | 0.020 (0.51) | 2    | 561R10TCCV30  |
| 3.3   |          |                      |                       |                         |           |              |      | 561R10TCCV33  |
| 3.9   |          |                      |                       |                         |           |              |      | 561R10TCCV39  |
| 4.7   |          |                      |                       |                         |           |              |      | 561R10TCCV47  |
| 5.0   |          |                      |                       |                         |           |              |      | 561R10TCCV50  |
| 5.6   |          |                      |                       |                         |           |              |      | 561R10TCCV56  |
| 6.8   |          |                      |                       |                         |           |              |      | 561R10TCCV68  |
| 8.2   |          |                      |                       |                         |           |              |      | 561R10TCCV82  |
| 10  |          |                      |                       |                         |           |              |      | 561R10TCCQ10  |
| 12  |          |                      |                       |                         |           |              |      | 561R10TCCQ12  |
| 15  |          |                      |                       |                         |           |              |      | 561R10TCCQ15  |
| 18  |          |                      |                       |                         |           |              |      | 561R10TCCQ18  |
| 20  |          |                      |                       |                         |           |              |      | 561R10TCCQ20  |
| 22  |          |                      |                       |                         |           |              |      | 561R10TCCQ22  |
| 25  |          |                      |                       |                         |           |              |      | 561R10TCCQ25  |
| 27  | ± 5 %    | 0.290 (7.4)          | 0.156 (4.0)           | 0.250 (6.4)             | 22        | 0.025 (0.64) | 1    | 561R10TCCQ27  |
| 30  |          |                      |                       |                         |           |              |      | 561R10TCCQ30  |
| 33  |          |                      |                       |                         |           |              |      | 561R10TCCQ33  |
| 39  |          |                      |                       |                         |           |              |      | 561R10TCCQ39  |
| 47  |          |                      |                       |                         |           |              |      | 561R10TCCQ47  |
| 50  |          |                      |                       |                         |           |              |      | 561R10TCCQ50  |
| 56  |          |                      |                       |                         |           |              |      | 561R10TCCQ56  |
| 68  |          |                      |                       |                         |           |              |      | 561R10TCCQ68  |
| 82  |          |                      |                       |                         |           |              |      | 561R10TCCQ82  |
| 100   |          |                      |                       |                         |           |              |      | 561R10TCCT10  |
| 120   |          |                      |                       |                         |           |              |      | 561R10TCCT12  |
| 150   |          |                      |                       |                         |           |              |      | 561R10TCCT15  |
| 180   |          |                      |                       |                         |           |              |      | 561R10TCCT18  |
| 220   |          |                      |                       |                         |           |              |      | 561R10TCCT22  |
| 270   |          |                      |                       |                         |           |              |      | 561R10TCCT27  |
| <b>U2J (N750)</b>   |          |                      |                       |                         |           |              |      |               |
| 33  | ± 5 %    | 0.290 (7.4)          | 0.156 (4.0)           | 0.250 (6.4)             | 24        | 0.020 (0.51) | 2    | 561R10TCUQ33  |
| 68  |          | 0.370 (9.4)          | 0.156 (4.0)           | 0.250 (6.4)             | 22        | 0.025 (0.64) |      | 561R10TCUQ68  |
| <b>M3K (N1000)</b>  |          |                      |                       |                         |           |              |      |               |
| 560   | ± 5 %    | 0.560 (14.2)         | 0.156 (4.0)           | 0.375 (9.5)             | 22        | 0.025 (0.64) | 1    | 561R10TCUT56  |
| <b>S3N (N3300)</b>  |          |                      |                       |                         |           |              |      |               |
| 680   | ± 5 %    | 0.630 (16.0)         | 0.156 (4.0)           | 0.375 (9.5)             | 22        | 0.025 (0.64) | 1    | 561R10TCUT68  |

| RELATED DOCUMENTS   |  |
|---------------------|--|
| General Information | <a href="http://www.vishay.com/doc?23140">www.vishay.com/doc?23140</a> |



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