

Lower Voltage Ceramic DC Disc Capacitors 1000 V_{DC} Precision Capacitors


RoHS
COMPLIANT

FEATURES

- Ultra stable over temperature and voltage
- Used when ultimate stability is required
- Radial leads
- Ceramic singlelayer capacitor
- Material categorization: for definitions of compliance please see 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 |
| Voltage (V _{DC}) | 1000 | | |
| Min. Capacitance (pF) | 1.0 | 3.0 | 33 |
| Max. Capacitance (pF) | 2.7 | 270 | 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

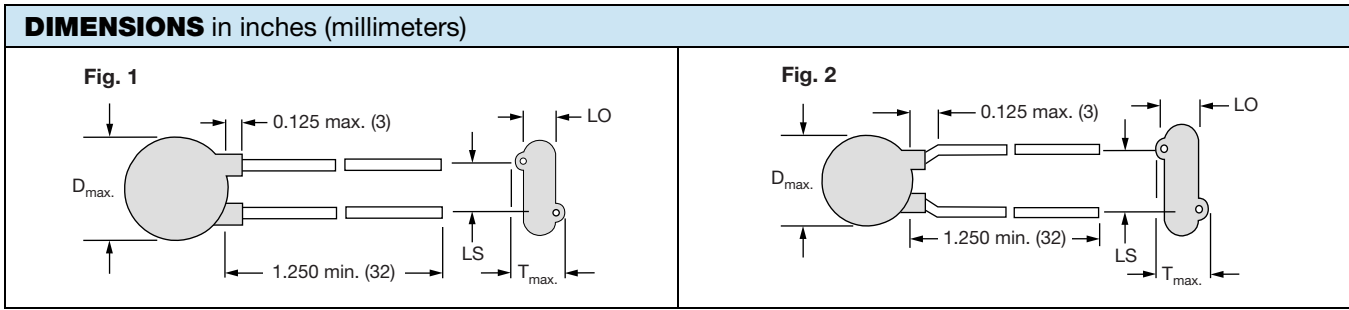
 1000 V_{DC}
DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

 2500 V_{DC}, 2 s

CERAMIC DIELECTRIC

C0K, C0G, U2J (class 1)



| ORDERING INFORMATION, CERAMIC 1000 V_{DC} PRECISION CAPACITORS | | | | | | | | | | | | |
|---|-------------|--------------------------------------|---------------------------------------|--------------------------------|-----------------------------------|-----------|--------------|------|---------------|-------------|-------------|--------------|
| C (pF) | TOL. | D _{max.} DIAMETER INCH (mm) | T _{max.} THICKNESS INCH (mm) | LS LEAD SPACE INCH (mm) ± 1 mm | LO LEAD OFFSET INCH (mm) ± 0.5 mm | WIRE SIZE | | FIG. | ORDERING CODE | | | |
| | | | | | | AWG | INCH (mm) | | | | | |
| C0K (P100) | | | | | | | | | | | | |
| 1.0 | ± 0.5 pF | 0.250 (6.4) | 0.156 (4.0) | 0.250 (6.4) | 0.098 (2.5) | 24 | 0.020 (0.51) | 2 | 561R10TCCV10 | | | |
| 2.2 | | | | | 0.051 (1.3) | | | | 561R10TCCV22 | | | |
| 2.7 | | | | | 0.043 (1.1) | | | | 561R10TCCV27 | | | |
| C0G (NPO) | | | | | | | | | | | | |
| 3.0 | ± 0.5 pF | 0.250 (6.4) | 0.156 (4.0) | 0.250 (6.4) | 0.063 (1.6) | 24 | 0.020 (0.51) | 2 | 561R10TCCV30 | | | |
| 3.3 | | | | | 0.055 (1.4) | | | | 561R10TCCV33 | | | |
| 3.9 | | | | | 0.055 (1.4) | | | | 561R10TCCV39 | | | |
| 4.7 | | | | | 0.043 (1.1) | | | | 561R10TCCV47 | | | |
| 5.0 | | | | | 0.043 (1.1) | | | | 561R10TCCV50 | | | |
| 5.6 | | | | | 0.039 (1.0) | | | | 561R10TCCV56 | | | |
| 6.8 | | | | | 0.047 (1.2) | | | | 561R10TCCV68 | | | |
| 8.2 | | | | | 0.043 (1.1) | | | | 561R10TCCV82 | | | |
| 10 | | | | | 0.051 (1.3) | | | | 561R10TCCQ10 | | | |
| 12 | | | | | 0.043 (1.1) | | | | 561R10TCCQ12 | | | |
| 15 | | | | | 0.039 (1.0) | | | | 561R10TCCQ15 | | | |
| 18 | | | | | 0.043 (1.1) | | | | 561R10TCCQ18 | | | |
| 20 | | | | | 0.039 (1.0) | | | | 561R10TCCQ20 | | | |
| 22 | | | | | 0.039 (1.0) | | | | 561R10TCCQ22 | | | |
| 25 | | | | | 0.035 (0.9) | | | | 561R10TCCQ25 | | | |
| 27 | 0.047 (1.2) | 561R10TCCQ27 | | | | | | | | | | |
| 30 | 0.051 (1.3) | 561R10TCCQ30 | | | | | | | | | | |
| 33 | 0.047 (1.2) | 561R10TCCQ33 | | | | | | | | | | |
| 39 | 0.043 (1.1) | 561R10TCCQ39 | | | | | | | | | | |
| 47 | 0.051 (1.3) | 561R10TCCQ47 | | | | | | | | | | |
| 50 | ± 5 % | 0.440 (11.2) | 0.156 (4.0) | 0.250 (6.4) | 0.047 (1.2) | 22 | 0.025 (0.64) | 1 | 561R10TCCQ50 | | | |
| 56 | | | | | 0.047 (1.2) | | | | 561R10TCCQ56 | | | |
| 68 | | | | | 0.490 (12.4) | | | | 0.156 (4.0) | 0.250 (6.4) | 0.047 (1.2) | 561R10TCCQ68 |
| 82 | | | | | 0.490 (12.4) | | | | 0.156 (4.0) | 0.375 (9.5) | 0.043 (1.1) | 561R10TCCQ82 |
| 100 | | | | | 0.560 (14.2) | | | | 0.156 (4.0) | 0.375 (9.5) | 0.047 (1.2) | 561R10TCCT10 |
| 120 | | | | | | | | | | | 0.047 (1.2) | 561R10TCCT12 |
| 150 | | | | | | | | | | | 0.043 (1.1) | 561R10TCCT15 |
| 180 | | | | | | | | | | | 0.043 (1.1) | 561R10TCCT18 |
| 220 | | | | | 0.760 (19.3) | | | | 0.156 (4.0) | 0.375 (9.5) | 0.043 (1.1) | 561R10TCCT22 |
| 270 | | | | | 0.890 (22.6) | | | | 0.156 (4.0) | 0.375 (9.5) | 0.047 (1.2) | 561R10TCCT27 |
| U2J (N750) | | | | | | | | | | | | |
| 33 | ± 5 % | 0.290 (7.4) | 0.156 (4.0) | 0.250 (6.4) | 0.039 (1.0) | 24 | 0.020 (0.51) | 2 | 561R10TCUQ33 | | | |
| 68 | | 0.370 (9.4) | 0.156 (4.0) | 0.250 (6.4) | 0.039 (1.0) | 22 | 0.025 (0.64) | 2 | 561R10TCUQ68 | | | |
| 560 | | 0.650 (16.5) | 0.156 (4.0) | 0.375 (9.5) | 0.039 (1.0) | 22 | 0.025 (0.64) | 1 | 561R10TCUT56 | | | |
| 680 | | 0.710 (18.0) | 0.156 (4.0) | 0.375 (9.5) | 0.047 (1.2) | 22 | 0.025 (0.64) | 1 | 561R10TCUT68 | | | |

| RELATED DOCUMENTS | |
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| General Information | www.vishay.com/doc?23140 |



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