

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



### 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)


**RoHS**  
COMPLIANT

### 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>DC</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>

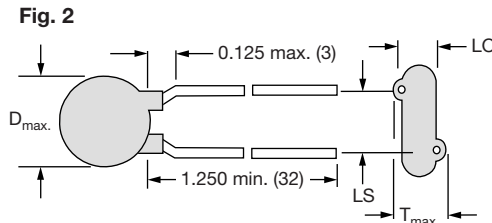
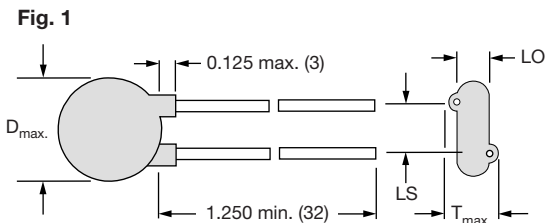
### DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

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

### CERAMIC DIELECTRIC

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

**DIMENSIONS** in inches (millimeters)

**ORDERING INFORMATION, CERAMIC 1000 V<sub>DC</sub> PRECISION CAPACITORS**

C (pF)	TOL.	D <sub>max.</sub> DIAMETER INCH (mm)	T <sub>max.</sub> 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 (NP0)															
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	± 5 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	24	0.020 (0.51)	2	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		0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	22	0.025 (0.64)	1	561R10TCCQ30						
33					0.047 (1.2)				561R10TCCQ33						
39					0.043 (1.1)				561R10TCCQ39						
47					0.051 (1.3)				561R10TCCQ47						
50					0.047 (1.2)				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)	22	0.025 (0.64)	1	561R10TCCT10						
120					0.047 (1.2)				561R10TCCT12						
150	0.630 (16.0)				0.156 (4.0)				0.375 (9.5)	0.043 (1.1)	561R10TCCT15				
180	0.680 (17.3)				0.156 (4.0)				0.375 (9.5)	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)	561R10TCUQ68							
M3K (N1000)															
560	± 5 %	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)	0.039 (1.0)	22	0.025 (0.64)	1	561R10TCUT56						
S3N (N3300)															
680	± 5 %	0.630 (16.0)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)	22	0.025 (0.64)	1	561R10TCUT68						

**RELATED DOCUMENTS**

General Information

[www.vishay.com/doc?23140](http://www.vishay.com/doc?23140)



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