

## Lower Voltage Ceramic DC Disc Capacitors 1000 V<sub>DC</sub> Temperature and Voltage Stabilized


**RoHS**  
COMPLIANT

### FEATURES

- Low losses
- High stability
- High capacitance in small size
- Complete range of capacitance values
- 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

- Bypassing
- Resonant circuit
- Coupling

### 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).

The standard tolerance is  $\pm 10\%$ .

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

### CAPACITANCE RANGE

10 pF to 10 nF

### RATED VOLTAGE

1000 V<sub>DC</sub>

### DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

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

### CERAMIC DIELECTRIC

C0G, U2J (Class 1)

X5F, X7R (Class 2)

QUICK REFERENCE DATA				
DESCRIPTION	VALUE			
Ceramic Class	1		2	
Ceramic Dielectric	C0G	U2J	X5F	X7R
Voltage (V <sub>DC</sub> )	1000			
Min. Capacitance (pF)	10	27	56	10 000
Max. Capacitance (pF)	10	39	4700	10 000
Mounting	Radial			

### INSULATION RESISTANCE

Min. 1000 ΩF or 50 000 MΩ

### TOLERANCE ON CAPACITANCE

$\pm 10\%$

### DISSIPATION FACTOR

2.0 % max. at 1 kHz; 1 V

### CATEGORY TEMPERATURE RANGE

(- 55 to + 125) °C C0G, U2J, X7R

(- 25 to + 85) °C X5F

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

55/125/21 C0G, U2J, X7R

25/085/21 X5F

### OPERATING TEMPERATURE RANGE

(- 55 to + 105) °C

DIMENSIONS in inches (millimeters)	
<b>Fig. 1</b> 	<b>Fig. 2</b> 
<b>LEAD OFFSET "LO" (nominal)</b>	
1000 V <sub>DC</sub>	0.050" (1.3 mm)

ORDERING INFORMATION, CERAMIC 1000 V <sub>DC</sub> TEMPERATURE AND VOLTAGE STABILIZED								
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE INCH (mm)	AWG	WIRE SIZE INCH (mm)	FIG.	ORDERING CODE
<b>C0G (NP0)</b>								
10	± 10	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	24	0.020 (0.51)	2	561R10TSQ10
<b>U2J (N750)</b>								
27	± 10	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	24	0.020 (0.51)	2	561R10TSQ27
30								561R10TSQ30
33			0.156 (4.0)	0.250 (6.4)				561R10TSQ33
39								561R10TSQ39
<b>X5F</b>								
56	± 10	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	24	0.020 (0.51)	2	562R10TSQ56
68								562R10TSQ68
75								562R10TSQ75
82								562R10TSQ82
100								562R10TST10
120								562R10TST12
150								562R10TST15
180								562R10TST18
200								562R10TST20
220								562R10TST22
250		562R10TST25						
270		562R10TST27						
300		562R10TST30						
330		562R10TST33						
390		562R10TST39						
470		562R10TST47						
500		562R10TST50						
560		562R10TST56						
680		562R10TST68						
750		562R10TST75						
820	562R10TST82							
1000	562R10TSD10							
1500	0.440 (11.2)	0.156 (4.0)	0.250 (6.4)	0.250 (6.4)	22	0.025 (0.64)	1	562R10TSD15
2000								562R10TSD20
2200								562R10TSD22
2700								562R10TSD27
3300								562R10TSD33
4700								562R10TSD47
<b>X7R</b>								
0.010 μF	± 10	0.680 (17.3)	0.156 (4.0)	0.375 (9.5)	22	0.025 (0.64)	1	562R10TSS10

**TAPE AND REEL OPTIONS**

- Tape and reel available on diameter sizes 0.250" to 0.680"
- Part number codes and specifications for tape and reel packaging are found in the general information document - find web-link below

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



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