

## 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  $\Omega$ F or 50 000 M $\Omega$

### 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>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)	22	0.025 (0.64)	1	562R10TSD15				
2000	0.490 (12.4)	0.156 (4.0)	0.375 (9.5)				562R10TSD20				
2200	0.490 (12.4)	0.156 (4.0)	0.375 (9.5)				562R10TSD22				
2700	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)				562R10TSD27				
3300	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)				562R10TSD33				
4700	0.680 (17.3)	0.156 (4.0)	0.375 (9.5)				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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