

## 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

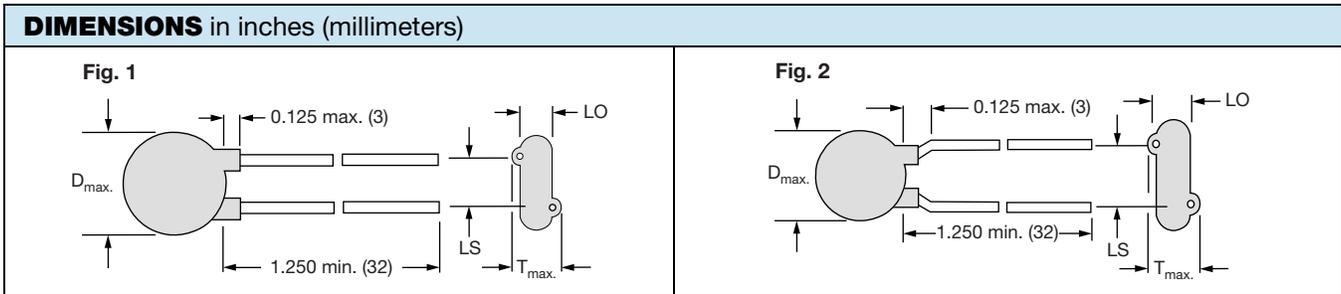
### CLIMATIC CATEGORY ACC. TO EN 60068-1

55/125/21 C0G, U2J, X7R

25/085/21 X5F

### OPERATING TEMPERATURE RANGE

(-55 to +105) °C



<b>ORDERING INFORMATION, CERAMIC 1000 V<sub>DC</sub> TEMPERATURE AND VOLTAGE STABILIZED</b>														
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)							
<b>C0G (NP0)</b>														
10	± 10	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	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)	0.047 (1.2)	24	0.020 (0.51)	2	561R10TSQ27					
30					0.039 (1.0)				561R10TSQ30					
33					0.039 (1.0)				561R10TSQ33					
39					0.039 (1.0)				561R10TSQ39					
<b>X5F</b>														
56	± 10	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.075 (1.9)	24	0.020 (0.51)	2	562R10TSQ56					
68					0.063 (1.6)				562R10TSQ68					
75					0.059 (1.5)				562R10TSQ75					
82					0.055 (1.4)				562R10TSQ82					
100					0.055 (1.4)				562R10TST10					
120					0.051 (1.3)				562R10TST12					
150					0.043 (1.1)				562R10TST15					
180					0.043 (1.1)				562R10TST18					
200					0.039 (1.0)				562R10TST20					
220					0.051 (1.3)				562R10TST22					
250		0.047 (1.2)	562R10TST25											
270		0.043 (1.1)	562R10TST27											
300		0.039 (1.0)	562R10TST30											
330		0.039 (1.0)	562R10TST33											
390		0.043 (1.1)	562R10TST39											
470		0.039 (1.0)	562R10TST47											
500		0.039 (1.0)	562R10TST50											
560		0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)				24	0.025 (0.64)	1	562R10TST56		
680					0.043 (1.1)							562R10TST68		
750					0.039 (1.0)							562R10TST75		
820	0.039 (1.0)				562R10TST82									
1000	0.035 (0.9)				562R10TSD10									
1500	0.440 (11.2)				0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	22				0.025 (0.64)	1	562R10TSD15
2000	0.490 (12.4)				0.156 (4.0)	0.375 (9.5)	0.051 (1.3)							562R10TSD20
2200	0.490 (12.4)				0.156 (4.0)	0.375 (9.5)	0.047 (1.2)							562R10TSD22
2700	0.560 (14.2)				0.156 (4.0)	0.375 (9.5)	0.051 (1.3)							562R10TSD27
3300	0.560 (14.2)				0.156 (4.0)	0.375 (9.5)	0.047 (1.2)							562R10TSD33
4700	0.680 (17.3)	0.156 (4.0)	0.375 (9.5)	0.051 (1.3)	562R10TSD47									
<b>X7R</b>														
0.010 μF	± 10	0.680 (17.3)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)	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

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



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