

## 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

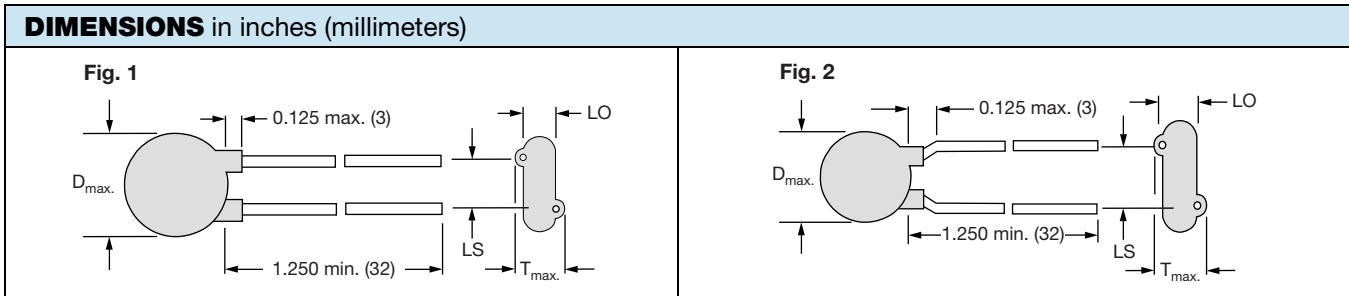
### CLIMATIC CATEGORY ACC. TO EN 60068-1

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	562R10TSD10						
680					0.043 (1.1)							562R10TSD15						
750					0.039 (1.0)							562R10TSD20						
820					0.039 (1.0)							562R10TSD27						
1000					0.035 (0.9)							562R10TSD33						
1500					0.440 (11.2)							0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	22	0.025 (0.64)	1	562R10TSD47
2000					0.490 (12.4)							0.156 (4.0)	0.375 (9.5)	0.051 (1.3)				562R10TSD15
2200					0.490 (12.4)							0.156 (4.0)	0.375 (9.5)	0.047 (1.2)				562R10TSD20
2700					0.560 (14.2)							0.156 (4.0)	0.375 (9.5)	0.051 (1.3)				562R10TSD22
3300					0.560 (14.2)							0.156 (4.0)	0.375 (9.5)	0.047 (1.2)				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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