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Lower Voltage Ceramic DC Disc Capacitors 1000 V_{DC} Temperature and Voltage Stabilized



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


RoHS
COMPLIANT

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".

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

INSULATION RESISTANCE

Min. 1000 Ω F or 50 000 M Ω

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

CAPACITANCE RANGE

10 pF to 10 nF

RATED VOLTAGE

1000 V_{DC}

DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

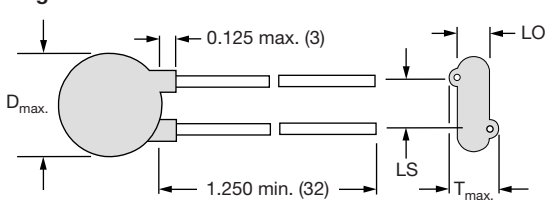
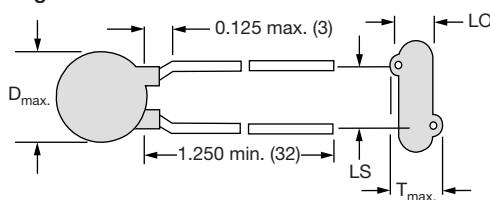
2500 V_{DC}, 2 s

CERAMIC DIELECTRIC

C0G, U2J (Class 1)

X5F, X7R (Class 2)

DIMENSIONS in inches (millimeters)

Fig. 1

Fig. 2

ORDERING INFORMATION, CERAMIC 1000 V_{DC} TEMPERATURE AND VOLTAGE STABILIZED

C (pF)	TOL. (%)	D _{max.} DIAMETER INCH (mm)	T _{max.} THICKNESS INCH (mm)	LS LEAD SPACE INCH (mm) ± 1 mm	LO LEAD OFFSET INCH (mm) ± 0.5 mm	WIRE SIZE		FIG.	ORDERING CODE	
C0G (NP0)										
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	
U2J (N750)										
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	
X5F										
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)				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)
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
X7R										
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

RELATED DOCUMENTS

General Information

www.vishay.com/doc?23140



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