

Lower Voltage Ceramic DC Disc Capacitors 1000 V_{DC} General Purpose



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 $\pm 20\%$.

Coating is made of resin coating or flammable resistant epoxy resin in accordance with "UL 94 V-0".

CAPACITANCE RANGE

10 pF to 0.1 μ F

RATED VOLTAGE

1000 V_{DC}

DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

2500 V_{DC}, 2 s

CERAMIC DIELECTRIC

C0G, U2J (Class 1)

X5F, X7R, Y5U, Z5U (Class 2)

QUICK REFERENCE DATA

DESCRIPTION	VALUE					
Ceramic Class	1			2		
Ceramic Dielectric	C0G	U2J	X5F	X7R	Y5U	Z5U
Voltage (V _{DC})	1000					
Min. Capacitance (pF)	10	33	100	1000	1000	1200
Max. Capacitance (pF)	10	33	500	1000	1000	100 000
Mounting	Radial					

INSULATION RESISTANCE

Min. 1000 Ω F or 20 000 M Ω for 10 pF to 0.020 μ F

Min. 15 000 M Ω for 0.050 μ F

Min. 5000 M Ω for 0.10 μ F

TOLERANCE ON CAPACITANCE

$\pm 20\%$

DISSIPATION FACTOR

2.5 % max. at 1 kHz; 1 V

CATEGORY TEMPERATURE RANGE

(-55 to +125) °C C0G, U2J, X7R

(-25 to +85) °C X5F, Y5U, Z5U

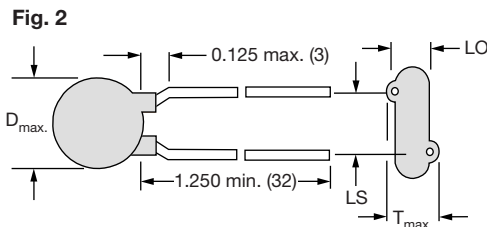
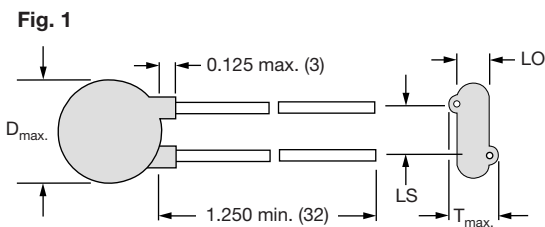
CLIMATIC CATEGORY ACC. TO EN 60068-1

55/125/21 C0G, U2J, X7R

25/085/21 X5F, Y5U, Z5U

OPERATING TEMPERATURE RANGE

(-55 to +105) °C

DIMENSIONS in inches (millimeters)

ORDERING INFORMATION, CERAMIC 1000 V_{DC} GENERAL PURPOSE

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	FIG.	WIRE SIZE		ORDERING CODE	
AWG										INCH (mm)
C0G (NP0)										
10	± 20	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	2	24	0.020 (0.51)	561R5GAQ10	
U2J (N750)										
33	± 20	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.039 (1.0)	2	24	0.020 (0.51)	561R5GAQ33	
X5F										
100	± 20	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.055 (1.4)	2	24	0.020 (0.51)	562R5GAT10	
150					0.043 (1.1)				562R5GAT15	
200					0.039 (1.0)				562R5GAT20	
220					0.051 (1.3)				562R5GAT22	
330					0.039 (1.0)				562R5GAT33	
470					0.039 (1.0)				562R5GAT47	
500					0.039 (1.0)				562R5GAT50	
X7R										
1000	± 20	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)	2	24	0.020 (0.51)	562R5GAD10	
Y5U										
1000	+ 100 / - 0	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.039 (1.0)	2	24	0.020 (0.51)	562R5HKD10	
Z5U										
1200	± 20	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.043 (1.1)	2	24	0.020 (0.51)	562R5GAD12	
1500					0.039 (1.0)				562R5GAD15	
2000					0.047 (1.2)				562R5GAD20	
2200					0.047 (1.2)				562R5GAD22	
2500					0.043 (1.1)				562R5GAD25	
2700					0.043 (1.1)				562R5GAD27	
3000					0.039 (1.0)				562R5GAD30	
3300					0.039 (1.0)				562R5GAD33	
4700	+ 100 / - 0	0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)	1	22	0.025 (0.64)	562R5GAD47	
5000		0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	0.043 (1.1)				562R5GAD50	
6800		0.440 (11.2)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)				562R5GAD68	
8200		0.440 (11.2)	0.156 (4.0)	0.250 (6.4)	0.043 (1.1)				562R5GAD82	
0.010 µF		0.490 (12.4)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)				562R5GAS10	
0.010 µF		0.490 (12.4)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)				562R5HKMS10	
0.010 µF		± 20	0.490 (12.4)	0.156 (4.0)	0.375 (9.5)				0.043 (1.1)	562R5HKS10
0.015 µF			0.560 (14.2)	0.156 (4.0)	0.375 (9.5)				0.043 (1.1)	562R5GAS15
0.020 µF			0.680 (17.3)	0.156 (4.0)	0.375 (9.5)				0.047 (1.2)	562R5GAS20
0.050 µF			0.770 (19.6)	0.200 (5.1)	0.375 (9.5)				0.047 (1.2)	565R10HKS50
0.10 µF			0.950 (24.1)	0.200 (5.1)	0.375 (9.5)				0.047 (1.2)	565R10GAP10

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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