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Vishay Cera-Mite

# **Lower Voltage Ceramic DC Disc Capacitors** 1000 V<sub>DC</sub> General Purpose



QUICK REFERENCE DATA						
DESCRIPTION	VALUE					
Ceramic Class	1		2			
Ceramic Dielectric	C0G	U2J	X5F	X7R	Y5U	Z5U
Voltage (V <sub>DC</sub> )	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  $\Omega F$  or 20 000  $M\Omega$ 

# **TOLERANCE ON CAPACITANCE**

± 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 X5F, Y5U, Z5U 25/085/21

## **OPERATING TEMPERATURE RANGE**

(-55 to +105) °C

## **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

#### **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 μF

#### **RATED VOLTAGE**

1000 V<sub>DC</sub>

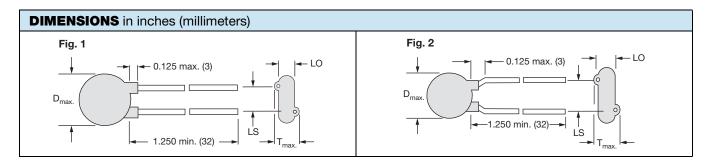
#### DIELECTRIC STRENGTH BETWEEN LEADS

Component test: 2500 V<sub>DC</sub>, 2 s

#### **CERAMIC DIELECTRIC**

C0G, U2J (Class 1) X5F, X7R, Y5U, Z5U (Class 2)

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ORDER	RING INFO	RMATION,	CERAMIC	1000 V <sub>DC</sub> (	GENERAL PU	RPOS	E		
C	TOL.	D <sub>max.</sub> DIAMETER	T <sub>max.</sub> THICKNESS	LS LEAD SPACE	LO LEAD OFFSET	FIG.	WIRE SIZE		ORDERING
(pF)	(%)	INCH (mm)	INCH (mm)	INCH (mm) ± 1 mm	INCH (mm) ± 0.5 mm	110.	AWG	INCH (mm)	CODE
COG (NPO	))								
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 (N75									
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					0.055 (1.4)				562R5GAT10
150					0.043 (1.1)				562R5GAT15
200					0.039 (1.0)				562R5GAT20
220	± 20	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	2	24	0.020 (0.51)	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					0.043 (1.1)				562R5GAD12
1500					0.039 (1.0)				562R5GAD15
2000					0.047 (1.2)				562R5GAD20
2200		0.000 (7.4)	0.450 (4.0)	0.050 (0.4)	0.047 (1.2)		0.4	0.000 (0.54)	562R5GAD22
2500		0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.043 (1.1)	2	24	0.020 (0.51)	562R5GAD25
2700					0.043 (1.1)				562R5GAD27
3000					0.039 (1.0)				562R5GAD30
3300	± 20				0.039 (1.0)				562R5GAD33
4700		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	+ 100 / - 0	0.490 (12.4)	0.156 (4.0)	0.375 (9.5)	0.043 (1.1)				562R5HKS10
0.015 µF	1227	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	± 20	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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