

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

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

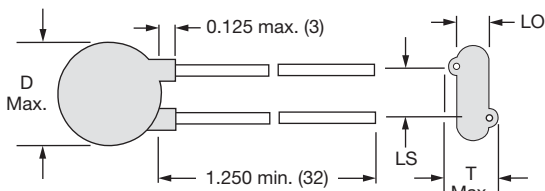
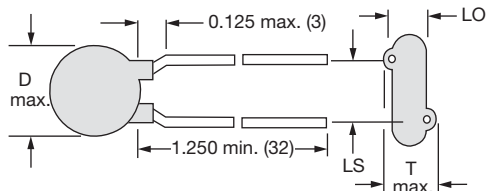
55/125/21 C0G, U2J, X7R

25/085/21 X5F, Y5U, Z5U

OPERATING TEMPERATURE RANGE

(- 55 to + 105) °C

DIMENSIONS in inches (millimeters)

Fig. 1

Fig. 2

LEAD OFFSET "LO" (nominal)

1000 V_{DC}

0.050" (1.3 mm)

ORDERING INFORMATION, CERAMIC 1000 V_{DC} GENERAL PURPOSE

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

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



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.