

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


**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  $\pm 20\%$ .

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  $\mu$ F

**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)

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**

$\pm 20\%$

**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

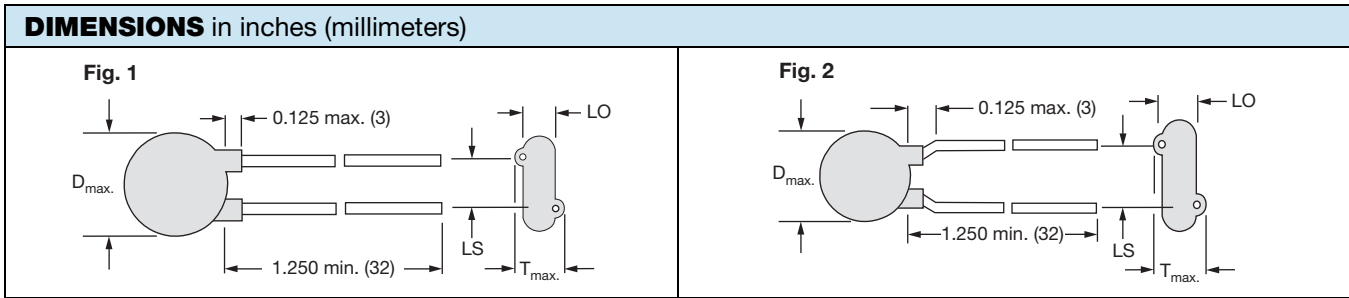
**CLIMATIC CATEGORY ACC. TO EN 60068-1**

55/125/21      C0G, U2J, X7R

25/085/21      X5F, Y5U, Z5U

**OPERATING TEMPERATURE RANGE**

(-55 to +105) °C



<b>ORDERING INFORMATION, CERAMIC 1000 V<sub>DC</sub> GENERAL PURPOSE</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	FIG.	WIRE SIZE		ORDERING CODE						
							AWG	INCH (mm)							
<b>C0G (NP0)</b>															
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						
<b>U2J (N750)</b>															
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						
<b>X5F</b>															
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						
<b>X7R</b>															
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						
<b>Y5U</b>															
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						
<b>Z5U</b>															
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					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	± 20	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

<b>RELATED DOCUMENTS</b>	
General Information	<a href="http://www.vishay.com/doc?23140">www.vishay.com/doc?23140</a>



## 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.**

# XMJ Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Vishay:

[5HKMS10JE](#) [5HKMS10RR](#) [5GAP15](#) [5GAP10](#) [5GAD82RE](#) [5GAD50QA](#) [5HKD10QD](#) [5GAT33RB](#) [5GASS10](#)  
[5HKS10](#) [5HKS50](#) [5GASS10RE](#) [5GASS10BU](#) [5GAS50](#) [5GAS15](#) [5GAS10](#) [5GAD82](#) [565RTGP10](#) [561R5GAQ10](#)  
[561R5GAQ20](#) [561R5GAQ33](#) [561R5GAQ47](#) [562R5GAD10](#) [562R5GAD10TR](#) [562R5GAD15](#) [562R5GAD20](#)  
[562R5GAD22](#) [562R5GAD27](#) [562R5GAD30](#) [562R5GAD33](#) [562R5GAD47](#) [562R5GAD47RR](#) [562R5GAD68](#)  
[562R5GAD82](#) [562R5GAS10](#) [562R5GAS10TR](#) [562R5GAS15](#) [562R5GAS20](#) [562R5GAS50](#) [562R5GASS20](#)  
[562R5GAT10](#) [562R5GAT15](#) [562R5GAT20](#) [562R5GAT22](#) [562R5GAT33](#) [562R5GAT47](#) [562R5GAT47TX](#)  
[562R5GAT50](#) [562R5HKD10](#) [562R5HKMS10RR](#) [562R5HKSP10](#) [562R5HKSS10](#) [562R5HKZS10](#) [562R5TSD10](#)  
[562R5TSD22](#) [562R5TSD33](#) [562R5TSD47](#) [562R5TSD68](#) [562R5TSS10JB](#) [562RTGD50](#) [562RTGS20](#) [562RTSD10](#)  
[562RTST10](#) [562RTST22](#) [565R10GAP10](#) [565R10GAP15](#) [565R10HKS50](#) [5GAT33KA](#) [5HKSS10](#) [5HKZS10RE](#)  
[5HKZS10JK1A](#) [5HKSS10RE](#) [5GAT10](#) [5GAT15](#) [5GAT47](#) [5GAS10TR](#) [5GAS10RE](#) [5GAS10FB](#) [5HKP10JJ](#)  
[5HKP10FZ](#) [5GAD10TK1A](#) [5GAD50RE](#) [5GAD50JK](#) [5GAD50QL](#) [562R5GASS10](#) [5HKS50FB1A](#) [5GAQ47](#) [5GAQ33](#)  
[5GAQ10](#) [5GAQ20](#) [5GAT20](#) [5GAD50](#) [5GAT22](#) [5GAD15](#) [5GAD10](#) [5GAD12](#) [5GAT15TK](#) [5GAS20](#) [5GAT10TR](#)  
[5GAT10RR](#)