

Lower Voltage Ceramic DC Disc Capacitors 1000 V_{DC} Precision Capacitors



FEATURES

- Ultra stable over temperature and voltage
- Used when the ultimate in stability is required
- Radial leads
- Ceramic singlelayer capacitor
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- Temperature compensating
- Resonant circuit

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).

Coating is made of flame retardant epoxy resin in accordance with "UL 94 V-0".

QUICK REFERENCE DATA					
DESCRIPTION	VALUE				
Ceramic Class	1				
Ceramic Dielectric	C0K	C0G	U2J	M3K	S3N
Voltage (V _{DC})	1000				
Min. Capacitance (pF)	1.0	3.0	33	560	680
Max. Capacitance (pF)	2.7	270	68	560	680
Mounting	Radial				

INSULATION RESISTANCE

Min. 1000 ΩF or 50 000 MΩ

TOLERANCE ON CAPACITANCE

± 5 %

DISSIPATION FACTOR

0.1 % max. at 1 MHz; 1 V

CATEGORY TEMPERATURE RANGE

(-55 to +125) °C

CLIMATIC CATEGORY ACC. TO EN 60068-1

55/125/21

OPERATING TEMPERATURE RANGE

(-55 to +105) °C

CAPACITANCE RANGE

1.0 pF to 680 pF

RATED VOLTAGE

1000 V_{DC}

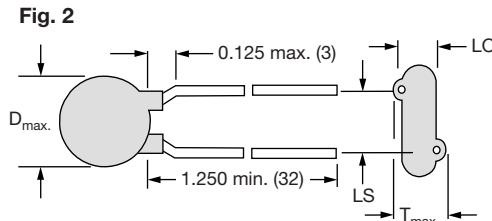
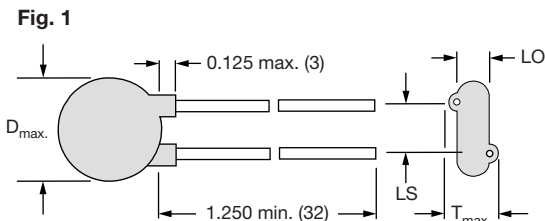
DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

2500 V_{DC}, 2 s

CERAMIC DIELECTRIC

C0K, C0G, U2J, M3K, S3N (Class 1)

DIMENSIONS in inches (millimeters)

ORDERING INFORMATION, CERAMIC 1000 V_{DC} PRECISION CAPACITORS

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
AWG INCH (mm)									
C0K (P100)									
1.0	± 0.5 pF	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.098 (2.5)	24	0.020 (0.51)	2	561R10TCCV10
2.2					0.051 (1.3)				561R10TCCV22
2.7					0.043 (1.1)				561R10TCCV27
C0G (NP0)									
3.0	± 0.5 pF	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.063 (1.6)	24	0.020 (0.51)	2	561R10TCCV30
3.3					0.055 (1.4)				561R10TCCV33
3.9					0.055 (1.4)				561R10TCCV39
4.7					0.043 (1.1)				561R10TCCV47
5.0					0.043 (1.1)				561R10TCCV50
5.6					0.039 (1.0)				561R10TCCV56
6.8					0.047 (1.2)				561R10TCCV68
8.2					0.043 (1.1)				561R10TCCV82
10	± 5 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	24	0.020 (0.51)	2	561R10TCCQ10
12					0.043 (1.1)				561R10TCCQ12
15					0.039 (1.0)				561R10TCCQ15
18					0.043 (1.1)				561R10TCCQ18
20					0.039 (1.0)				561R10TCCQ20
22					0.039 (1.0)				561R10TCCQ22
25					0.035 (0.9)				561R10TCCQ25
27					0.047 (1.2)				561R10TCCQ27
30		0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	22	0.025 (0.64)	1	561R10TCCQ30
33					0.047 (1.2)				561R10TCCQ33
39					0.043 (1.1)				561R10TCCQ39
47					0.051 (1.3)				561R10TCCQ47
50					0.047 (1.2)				561R10TCCQ50
56					0.047 (1.2)				561R10TCCQ56
68					0.047 (1.2)				561R10TCCQ68
82					0.043 (1.1)				561R10TCCQ82
100	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)	22	0.025 (0.64)	1	561R10TCCT10	
120				0.047 (1.2)				561R10TCCT12	
150				0.043 (1.1)				561R10TCCT15	
180				0.043 (1.1)				561R10TCCT18	
220				0.043 (1.1)				561R10TCCT22	
270				0.047 (1.2)				561R10TCCT27	
U2J (N750)									
33	± 5 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.039 (1.0)	24	0.020 (0.51)	2	561R10TCUQ33
68		0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	0.039 (1.0)	22	0.025 (0.64)		561R10TCUQ68
M3K (N1000)									
560	± 5 %	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)	0.039 (1.0)	22	0.025 (0.64)	1	561R10TCUT56
S3N (N3300)									
680	± 5 %	0.630 (16.0)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)	22	0.025 (0.64)	1	561R10TCUT68

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.