

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


RoHS
COMPLIANT

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

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

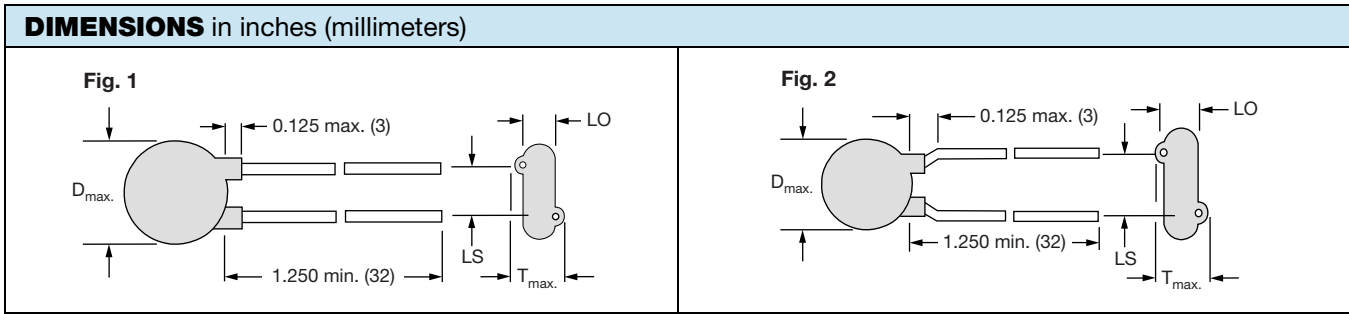
 1000 V_{DC}
DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

 2500 V_{DC}, 2 s

CERAMIC DIELECTRIC

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



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 (NPO)												
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					0.051 (1.3)				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	0.051 (1.3)	561R10TCCQ30										
33	0.047 (1.2)	561R10TCCQ33										
39	0.043 (1.1)	561R10TCCQ39										
47	0.051 (1.3)	561R10TCCQ47										
50	± 5 %	0.440 (11.2)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)	22	0.025 (0.64)	1	561R10TCCQ47			
56					0.047 (1.2)				561R10TCCQ56			
68					0.490 (12.4)				0.156 (4.0)	0.250 (6.4)	0.047 (1.2)	561R10TCCQ68
82					0.490 (12.4)				0.156 (4.0)	0.375 (9.5)	0.043 (1.1)	561R10TCCQ82
100					0.560 (14.2)				0.156 (4.0)	0.375 (9.5)	0.047 (1.2)	561R10TCCT10
120											0.047 (1.2)	561R10TCCT12
150											0.043 (1.1)	561R10TCCT15
180											0.043 (1.1)	561R10TCCT18
220					0.760 (19.3)				0.156 (4.0)	0.375 (9.5)	0.043 (1.1)	561R10TCCT22
270					0.890 (22.6)				0.156 (4.0)	0.375 (9.5)	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.

Vishay:

10TCCV10 10TCCV33 10TCCV39 10TCCV30 10TCCV50 10TCCQ68 10TCCQ22 10TCCQ25 10TCCQ27
10TCCQ20 561R10TCCQ10BA 561R10TCCQ12 561R10TCCQ15 561R10TCCQ15BA 561R10TCCQ18
561R10TCCQ18BA 561R10TCCQ20 561R10TCCQ20BA 561R10TCCQ22 561R10TCCQ22BA 561R10TCCQ25
561R10TCCQ27 561R10TCCQ30 561R10TCCQ33 561R10TCCQ39 561R10TCCQ43 561R10TCCQ50
561R10TCCQ68 561R10TCCQ75 561R10TCCQ82 561R10TCCT10 561R10TCCT15 561R10TCCT22
561R10TCCV10BA 561R10TCCV22BA 561R10TCCV27 561R10TCCV30BA 561R10TCCV33 561R10TCCV39
561R10TCCV47 561R10TCCV47BA 561R10TCCV50 561R10TCCV56BA 561R10TCCV68 561R10TCCV82BA
561R10TXQ22 561R5GAD20RB 10TCUT47 10TCUT22 10TCUT68 10TCUT56 10TCCV22BA 561R10TCCQ56
561R10TCUD10 561R10TCUQ47 561R10TCUQ68 561R10TCUQ56 561R10TCUQ33 10TCUT22RR 10TCUQ68
10TCUQ47 10TCUQ33 10TCUQ56 10TCUT20JE 10TCCV80BA 561R10TCCV10 10TCCT27 10TCCT22
10TCCQ82 10TCCQ75 10TCCQ47 10TCCQ43 10TCCQ90 10TCCQ33 10TCCQ39 10TCCQ30 10TCCQ12
10TCCQ56 10TCCQ15 10TCCQ10 10TCCQ18 10TCCQ50 10TCCV22 10TCCV27 10TCCV47 10TCCV82
10TCCT10 10TCCT15 10TCCT12 10TCCT18 10TCUT33 10TCUD10 10TCCV10BA 10TCCV68 561R10TCCV22
561R10TCCV80BA 561R10TCUT10 561R10TCCQ47 561R10TCCQ10 561R10TCCT12