Lower Voltage Ceramic DC Disc Capacitors 1000 V_{DC} Temperature and Voltage Stabilized

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

APPLICATIONS

- Bypassing
- Resonant circuit
- Coupling

QUICK REFERENCE DATA				
DESCRIPTION	VALUE			
Ceramic Class	1		2	
Ceramic Dielectric	C0G	U2J	X5F	X7R
Voltage (V_{DC})	1000			
Min. Capacitance (pF)	10	27	56	10 000
Max. Capacitance (pF)	10	39	4700	10 000
Mounting	Radial			

INSULATION RESISTANCE

Min. 1000 ΩF or 50 000 MΩ

TOLERANCE ON CAPACITANCE

± 10 %

DISSIPATION FACTOR

2.0 % max. at 1 kHz; 1 V

CATEGORY TEMPERATURE RANGE

(-55 to +125) °C	C0G, U2J, X7R
(-25 to +85) °C	X5F

CLIMATIC CATEGORY ACC. TO EN 60068-1

55/125/21	C0G, U2J, X7R
25/085/21	X5F

OPERATING TEMPERATURE RANGE

(-55 to +105) °C

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 ± 10 %.

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

CAPACITANCE RANGE

10 pF to 10 nF

RATED VOLTAGE

1000 V_{DC}

DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

2500 V_{DC}, 2 s

CERAMIC DIELECTRIC

C0G, U2J (Class 1)

X5F, X7R (Class 2)

DIMENSIONS in inches (millimeters)

Fig. 1

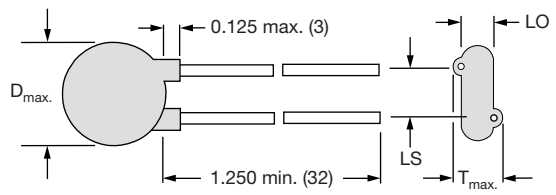
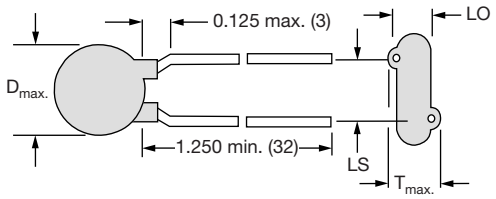


Fig. 2



ORDERING INFORMATION, CERAMIC 1000 V_{DC} TEMPERATURE AND VOLTAGE STABILIZED

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 AWG	WIRE SIZE INCH (mm)	FIG.	ORDERING CODE
C0G (NP0)									
10	± 10	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	24	0.020 (0.51)	2	561R10TSQ10
U2J (N750)									
27	± 10	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)	24	0.020 (0.51)	2	561R10TSQ27
30					0.039 (1.0)				561R10TSQ30
33			0.156 (4.0)	0.250 (6.4)	0.039 (1.0)				561R10TSQ33
39					0.039 (1.0)				561R10TSQ39
X5F									
56	± 10	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	0.075 (1.9)	24	0.020 (0.51)	2	562R10TSQ56
68					0.063 (1.6)				562R10TSQ68
75					0.059 (1.5)				562R10TSQ75
82					0.055 (1.4)				562R10TSQ82
100					0.055 (1.4)				562R10TST10
120					0.051 (1.3)				562R10TST12
150					0.043 (1.1)				562R10TST15
180					0.043 (1.1)				562R10TST18
200					0.039 (1.0)				562R10TST20
220					0.051 (1.3)				562R10TST22
250					0.047 (1.2)				562R10TST25
270					0.043 (1.1)				562R10TST27
300					0.039 (1.0)				562R10TST30
330					0.039 (1.0)				562R10TST33
390					0.043 (1.1)				562R10TST39
470					0.039 (1.0)				562R10TST47
500					0.039 (1.0)				562R10TST50
560		0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	0.047 (1.2)				562R10TST56
680					0.043 (1.1)				562R10TST68
750					0.039 (1.0)				562R10TST75
820					0.039 (1.0)				562R10TST82
1000					0.035 (0.9)				562R10TSD10
1500		0.440 (11.2)	0.156 (4.0)	0.250 (6.4)	0.051 (1.3)	22	0.025 (0.64)	1	562R10TSD15
2000		0.490 (12.4)	0.156 (4.0)	0.375 (9.5)	0.051 (1.3)				562R10TSD20
2200		0.490 (12.4)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)				562R10TSD22
2700		0.560 (14.2)	0.156 (4.0)	0.375 (9.5)	0.051 (1.3)				562R10TSD27
3300		0.560 (14.2)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)				562R10TSD33
4700		0.680 (17.3)	0.156 (4.0)	0.375 (9.5)	0.051 (1.3)				562R10TSD47
X7R									
0.010 µF	± 10	0.680 (17.3)	0.156 (4.0)	0.375 (9.5)	0.047 (1.2)	22	0.025 (0.64)	1	562R10TSS10

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.

Mouser Electronics

Authorized Distributor

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

Vishay:

10TCCV56 10TCCV39BA 10TSQ10QR 10TSQ10PL 10TSQ10PA 10TSQ30RE 10TSD10BA 10TST68RR 10TCCQ10BA 561R10TSQ27 561R10TSQ30 561R10TSQ33 561R10TSQ47 561R10TSQ50 561RU2JQA102EC200K 562R10TSD10BA 562R10TSD10TK 562R10TSD15 562R10TSD20 562R10TSD22 562R10TSD33 562R10TSQ56 562R10TSQ68 562R10TSQ68PL 562R10TST10 562R10TST15 562R10TST22 562R10TST25 562R10TST27 562R10TST33 562R10TST33RR 562R10TST39 562R10TST47 562R10TST47WK 562R10TST56 562R10TST68 562R10TST68RR 562R10TST82 562R5TSD10 562R5TSD22 562RTST10 562RTST22 10TSQ50RE 10TCCV50BA 10TCCV50RE 10TCCV30BA 10TCUT15JE 10TCCV68BA 10TCCQ18TR 10TCCQ18BA 10TCCQ22QA 10TSQ68PL 10TSCQ22BA 10TSD18 10TSD10 10TSD15 10TST75 10TST39 10TST33 10TSD33 10TST30 10TSQ68 10TSQ25 10TSQ27 10TSQ50 10TSQ33 10TSQ30 10TSQ39 10TSQ56 10TSQ75 10TSQ10 10TCUQ47RE1A 10TSQ47RE 10TSQ82 10TSQ47 10TCCV56BA 10TST47WK 562R10TST20 562R10TST30 562R10TST18 562R10TST12 562R10TSD27 562R10TSD18 10TSQ33RE 10TSQ33JQ 10TSQ47PL 10TCCQ25BA 10TCCV47BA 10TSD20 10TSD22 10TSD47 10TCCQ12BA 10TSS10 10TCCQ15BA 10TCCQ30BA 10TCCQ22BA 10TCCQ22TR 10TCCV82BA 10TST33RR 562RTST47